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PSYCHOLOGICAL ABSTRACTS

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GENERAL

3308. [Anon.] **Bibliographie der Philosophie und Psychologie. II.** (Bibliography of philosophy and psychology.) Leipzig: Heims, 1931. Pp. 32.—*R. R. Willoughby* (Clark).

3309. **Baernstein, H. D., & Hull, C. L. A mechanical model of the conditioned reflex.** *J. Gen. Psychol.*, 1931, 5, 99–106.—In the mechanical model described, push buttons represent receptors, an electric bulb represents the responding system, and synapses are represented by mercury-toluene thermoregulators. "Changes in small storage cells made from two lead plates suspended in sulphuric acid represent some of the chemical changes occurring in the nervous system. Electric batteries supply the energy. No claim is made that these mechanisms are duplicates of the corresponding organic processes." The properties of the conditioned reflex which are paralleled by the polarizable cell are: simple stimulus substitution and forgetting, the order of stimulation to produce conditioning, experimental extinction, and spontaneous recovery, secondary extinction, irradiation, differentiation, external inhibition, and redintegration of compound stimuli.—*H. Cason* (Wisconsin).

3310. **Barbado, P. M. Introduccion a la psicologia experimental.** (Introduction to experimental psychology.) Madrid: Voluntad, 1928. Pp. 712.—Includes over 1400 citations from over 700 authors.—*J. P. Hylan* (Stoneham, Mass).

3311. **Broxon, J. W., & Muenzinger, K. F. Changes in skin potentials during the psychogalvanic reflex.** *J. Gen. Psychol.*, 1931, 5, 94–98.—The method used "has the advantage that it measures potential differences without any current flowing through the electrodes, thus permitting continuous readings that are unaffected by changes in resistance and polarization. . . . When a static instrument is used to indicate potential difference, an arrangement which leaves the electrodes at all times in an open circuit, the psychogalvanic reflex exists and is evidenced by changes in the potential differences between the electrodes, giving deflections that are similar in character to those observed commonly with closed-circuit instruments. Changes of potential differences during response to stimulation are highly correlated with changes in resistance (real or apparent) as measured with an alternating, 60-cycle, current. Moisture and pressure are factors that affect the initial potential difference when solid electrodes are used."—*H. Cason* (Wisconsin).

3312. **Chou, S. K. Cinematography of psychologies.** *Psychol. Rev.*, 1931, 38, 254–275.—The author employs the analogy of the cinematograph to clarify his explanation of the necessity for the many existing schools or viewpoints in psychology. Just as, in taking moving pictures, it is necessary constantly to shift the point of view of the camera, so in describing and explaining human behavior it is necessary for many points of view to be brought to bear. But the multiplicity of viewpoints does not bother the movie audience in following the film drama; nor should "schools" bother the student of psychology provided he accepts an electicism of psychologies.—*A. G. Bills* (Chicago).

3313. **Darrow, C. W. Continuous quantitative records in standard units by the Wheatstone bridge method.** *J. Gen. Psychol.*, 1930, 4, 418–420.—"The *Behavior Research resistance box* is designed to be used auxiliary to a Wheatstone bridge for making continuous quantitative records of the galvanic skin reflex without repeated rebalancing or elaborate calculation. The advantages of the bridge method, extreme sensitivity, and measurement in standard units (ohms), are retained. The device may be used when registration is made photographically, when tracings are made by following the deflections by hand, or when record is kept by merely noting down the numerical magnitude of the changes."—*H. Cason* (Wisconsin).

3314. **Davis, R. C. A cathode ray oscillograph apparatus for the psychological laboratory.** *J. Gen. Psychol.*, 1931, 5, 107–115.—The apparatus has the new features of providing a means of taking photographic records of single phenomena on ordinary camera film without using a dark room, and an electric circuit which makes possible the measurement of the interval between two events such as a stimulus and a response. The cathode ray oscillograph tube has been found valuable for the calibration of psychological instruments, for measuring reaction times, and for the study of physiological action potentials.—*H. Cason* (Wisconsin).

3315. **Davis, R. C., & Porter, J. M., Jr. A measuring device for the galvanic reflex.** *J. Gen. Psychol.*, 1931, 5, 115–120.—"Since the psychogalvanic apparatus commonly used is so very faulty from the electrical viewpoint, and since the string galvanometer or other oscillograph is extremely expensive the advantages of a device using the common milliammeter bear investigation. The accessory apparatus here described constitutes a satisfactory circuit for the use of the milliammeter." In studying the mag-

nitude of the reflex the apparatus has the following advantages: (1) the deflection is proportional to the reflex, (2) the subject's current may be varied at will, but once set remains constant, and (3) a continuous record of the subject's total resistance may be obtained without putting the subject into a momentary circuit for its measurement.—*H. Cason* (Wisconsin).

3316. **Dodge, R. Conditions and consequences of human variability.** New Haven: Yale Univ. Press, 1931. Pp. 162. $2.50.—The author brings together results of his past experimental work bearing upon the problem of human variability. He considers variability the most conspicuous characteristic of human behavior and hence of major importance for psychology. The influence of refractory phase, of relative fatigue, of faint stimuli, of inhibition and summation are discussed; then the development of simple behavior patterns and their complication by the interaction of neural levels are brought into the picture; and finally there is material on cortical integration and the mind-body problem.—*P. E. Huston* (Worcester State Hospital).

3317. **East, E. M. [Ed.] Biology and human affairs.** New York: Whittlesey House, McGraw-Hill, 1931. Pp. xi + 399. $3.50.—This book is characterized as "a survey of the outposts of biological knowledge." In an introductory chapter entitled "Biology and human problems," E. M. East reviews the history of the scientific point of view and its conflicts with mysticism. His plea is for a "scientific humanism" based upon the findings of the biological sciences. There is a chapter by F. H. Hankins on "The prospects of the social sciences." "In the light of present knowledge we seem warranted in saying," according to Hankins, "that the future of our culture is dependent on learning *how to accomplish by scientific methods* that elimination of the unfit and ill adapted which now is accomplished by natural selection on both the biological and sociological planes." In his chapter on "The renaissance of psychology" J. Jastrow points out that psychology is a natural science among the sciences. After reviewing briefly the history of psychology and its present biological leanings he says, "The conclusion to be drawn from the renaissance and its antecedents is that issues once regarded as lying outside the realm of the methods of science may be pursued in the same temper and logic as have brought about the great advances in the physical sciences and the control of natural resources. This does not mean that psychology will be reducible to physics or physiology; its distinctive province remains and will ever require adaptation of technique to the conditions under which the phenomena occur." A chapter by L. M. Terman entitled "Educational psychology" deals with instinctive tendencies and the controversies surrounding them, individual differences and their causes, psychometric methods, mental development, and the psychology of learning. He stresses throughout his discussion the increasing cognizance on the part of educators of the individual differences of pupils. W. V. Bingham contributes a chapter on "Psychology in industry," a concise discussion of the various contributions of psychological research to the problems of industry. E. M. East's chapter on "Heredity" reviews the principles of Mendelian inheritance and the recent advances in the field of genetics. The viewpoint of the entire chapter is summarized in the following statement: "Give the growing child the best conditions possible; it is highly desirable; but do not expect to change the character of his features or the quality of his brains." The other chapters of this book have only an indirect bearing upon psychological problems. They are as follows: M. Fishbein, "Frontiers of medicine"; H. S. Cumming and A. M. Stimson, "The outlook of public health work"; E. K. Marshall, Jr., "Physiology of today"; H. M. Parshly, "Zoology and human welfare"; D. F. Jones, "Efforts to increase food resources"; and E. V. McCollum, "Diet and nutrition."—*N. L. Munn* (Pittsburgh).

3318. **Farnsworth, P. R. Bell Laboratory Victor records.** *J. Gen. Psychol.*, 1930, 4, 415–416.—In these records, music and speech are presented normally, and are then distorted in various ways. The Bell Telephone Laboratories will lend these records to departments of psychology upon request.—*H. Cason* (Wisconsin).

3319. **Grindley, G. C. Apparatus for a group demonstration of Weber's law.** *J. Gen. Psychol.*, 1930, 4, 427–429.—Description of a simple apparatus which may be used in a class demonstration of Weber's law for intensity of illumination.—*H. Cason* (Wisconsin).

3320. **Hathaway, S. R. A pendulum chronoscope.** *J. Gen. Psychol.*, 1930, 4, 423–427.—"The operation of the release mechanism is silent, and there is but one moving part, the pendulum itself. Records are made on regular adding-machine paper tape. The essential part of the chronoscope is, of course, the pendulum. In considering various types of pendulums, we have attempted to select one which has a low air-resistance to its swing, and which would be as simple as possible to construct. The pendulum finally chosen is a single plate of brass shaped roughly like two folding fans connected at their centers. At this point of connection is the fulcrum. The upper part being somewhat smaller than the lower section gives the effect of a compound pendulum which is comparatively short in total length. Its period is slightly over one second. . . . When the break key is pressed, giving the stimulus, the magnet releases the pendulum which begins to fall from its initial position of 30 degrees from the vertical. . . . Between the pointer and the metal plate is a paper tape which runs from a roll at one end of the metal plate through guides following the curve of the plate to a cutter for tearing off the paper at the other end. . . . A spark passes from the pointer on the pendulum to the curved plate beneath, burning a hole through the paper tape. This hole marks the posi-

tion of the pendulum at the moment of breaking the primary circuit."—*H. Cason* (Wisconsin).

3321. **MacLean, W. R., & Sivian, L. J. A direct reading audio-frequency phase meter.** *J. Acoustical Soc.*, 1931, 2, 419–433.—A description of an apparatus designed to determine both amplitude and phase variations in sound pressure at different distances from the source.—*P. E. Huston* (Worcester State Hospital).

3322. **Oates, D. W. The energy concept in modern psychology.** *J. Gen. Psychol.*, 1930, 4, 401–406.—A discussion of the value of the concept of psychic energy as related to (1) Spearman's two-factor theory of intelligence, (2) Downey's will-temperament, (3) McDougall's theory of instincts, and Burt's theory of general emotionality. Each of these theories includes "a common hypothesis of a reservoir of freed energy and a modifying factor determining the direction and rate of flow of the psychic energy available."—*H. Cason* (Wisconsin).

3323. **Paschal, F. C. An interval timer.** *J. Gen. Psychol.*, 1930, 4, 420–423.—The instrument will give irregular signals more than one second in length without the construction of special parts.—*H. Cason* (Wisconsin).

3324. **Scheerer, M. Die Lehre von der Gestalt.** (The theory of the Gestalt.) Berlin & Leipzig: W. De Gruyter, 1931. Pp. 405. M. 17.00.—Another exposition by a sympathetic interpreter of the configurational psychology. The chapter headings indicate the scope of the work: Introduction: 1. The terms *Gestalt* and *Gestalttheorie;* object of the investigation; 2. Configurational method and the conditions of its exposition. Part I. The method. (1) The configurational problem in sensory psychology: 3. The fundamental situation and the opposition; 4. Demonstration of configuration in the phenomenal world; 5. Configurational and meaning problem from the standpoint of configurationism. (2) The configurational problem in physics: 6. Physiological hypothesis; 7. Physical configuration and actual consciousness; 8. The mind-body problem. (3) The principle of *Gestaltprägnanz*: 9. Physical: the tendency toward *Prägnanz* and inertia to *Prägnanz;* 10. Psychophysics: Meaning and *Prägnanz;* 11. Biological: Purpose and *Prägnanz;* physical system and nature system; Nature system environment. (4) The relation living being-environment as a psychological maxim; 12. Nativism-empiricism; instinct and reflex; 13. Perception and environment; the limen, configurational constancy and objectivity of configuration; 14. Convergence and correspondence; inner and outer system conditions; person and configuration; psychological or biological methods. Part II. Configurational psychology as the science of the inner and outer behavior of living beings. (1) Forms of behavior: 15. Action, feeling and will; insightful conduct; 16. Thinking, recognition. (2) 17. Consciousness, understanding of others, expressive and naming functions; 18. Recollection; concept of the self, character and personality. (3) Understanding and explaining in configurational psychology; 19. Configuration, law and meaningful events; 20. Objectivation, subjectivation; configuration and representation. Appendix: The subjective method and its relation to present-day psychology; 21. Relation to developmental and thought psychology; motivation. Brief bibliography.—*H. Helson* (Bryn Mawr College).

3325. **Seashore, R. H. Phonograph records from the Bell Telephone Laboratories illustrating phenomena of acoustics.** *J. Gen. Psychol.*, 1930, 4, 416–417.—"In each record the normal sound, a selection of instrumental music or speech, is compared with the same selection as modified by electrical instruments such as high-pass and low-pass filters for elimination of certain pitch frequencies, and underloaded and overloaded amplifiers and a phase changing device." The records will be distributed to departments of psychology with the compliments of the Bell Telephone Laboratories, and requests may be sent to the Bureau of Publication, Bell Telephone Laboratories, 436 West Street, New York, N. Y.—*H. Cason* (Wisconsin).

3326. **Seltsam, K. Organismic psychology and educational theory.** *J. Educ. Psychol.*, 1931, 22, 351–359.—The general tenets of the organismic point of view are summarized and some of the criticisms directed against it are answered. Its contributions to educational philosophy are then suggested briefly. In education it is desirable to consider stimulating situations as wholes, for only thus can learning be understood and directed adequately. It is necessary, also, to reconsider the hedonic conception. In so far as organismic psychology has helped to clarify the picture of the organism to be educated and stimulated inquiry, it has a contribution to make to education.—*J. A. McGeoch* (Missouri).

3327. **Speakman, E. A. An automatic race timer.** *Rev. Sci. Instruments*, 1931, 2, 297–304.—The instrument described is used to time races by the use of a microphone, a photoelectric cell, an amplifier, and a clock. The time is recorded in 1/120 of a second from the instant when the sound of the starting gun reaches the runner's ear to the instant when the runner's chest touches the tape at the finish.—*D. B. Judd* (Bureau of Standards).

3328. **Stern, W. Die Stellung der Psychologie an den Deutschen Universitäten.** (The place of psychology in German universities.) *Dtsch. Schule*, 1931, 35, No. 2.—Address delivered at the conference of the Erziehungswissenschaftliche Hauptstelle des Deutschen Lehrervereins, Leipzig, Oct. 25, 1930. It is a plea for the maintenance of the existing psychological institutes at German universities and for the establishment of new ones. Reasons for the desirability and necessity of the teaching of psychology and research in that science: (1) psychology is the link between the natural and the social sciences; (2) research in psychology should provide new contributions and scientific guidance to all branches of applied psychology; (3) universities

should provide psychological training for students who want to enter practical careers (physicians, lawyers, theologians and mainly teachers); (4) academic psychology is necessary to counteract quackery; (5) teachers of psychology for normal schools and teachers' academies need a university training in psychology.—*H. M. Beckh* (Berkeley, Cal.).

3329. **Strecker, E. A., & Appel, K. E. Body and mind.** *Ment. Hygiene Bull.*, 1931, 9, No. 4, 1; 4–5.—This article is a reprinting of a chapter from the book *Discovering Ourselves*. The article points out the various ways in which the body and mind influence each other.—*E. M. Ligon* (Union).

3330. **Székely, L. A pszichológiai megismerés útjai.** (The present position of epistemology in psychology.) *Magyar psychologiai Szemle*, 1930, 3, 75–127.—The author discusses the attitudes taken by the three psychological points of view (*geisteswissenschaftliche*, classical and modern *naturwissenschaftliche*) toward the formation of knowledge and ideas.—*D. E. Johannsen* (Rochester).

3331. **Tiffin, J. An apparatus for photographically recording piano playing.** *J. Gen. Psychol.*, 1931, 5, 120–124.—"The device records photographically the time of incidence, duration, time of ending, and the relative intensity of each note played during an entire piano rendition played under completely normal conditions."—*H. Cason* (Wisconsin).

3332. **Tinker, M. A. The laboratory course in psychology. I. Methods employed for ranking stimuli.** *J. Gen. Psychol.*, 1931, 5, 53–63.—A summary of the literature and some further results on the relative advantages for purposes of instruction in the laboratory course in psychology of three methods: (1) paired comparisons, (2) order of merit, and (3) rating on a graphic scale. "The graphic rating technique has only a moderately high reliability in estimating the affective value of colors, but a very high reliability in judging the affective value of musical intervals. The reliabilities of the other methods were high in both experimental situations."—*H. Cason* (Wisconsin).

3333. **Valentine, W. C., & Meyer, M. F. A description of the lectometer and the reliability of lectometer scores.** *J. Gen. Psychol.*, 1930, 4, 407–415.—The first model was demonstrated at the 1923 A. P. A. meeting, and the second model was built at Ohio State University during 1928. When using the instrument, the subject copies dots from a row of blocks onto a row of tablets, and the copying is done by pushing switches which compose the tablets, the instructions being: "For every dot in the *top* row on the block, push a key in the *bottom* row in the tablet and for every dot in the *bottom* row on the block push a key in the *top* row in the tablet." "The lectometer has a reliability expressed by several Pearsonian coefficients ranging from $.727 \pm .09$ to $.926 \pm .02$. . . . The mean score of the women indicates poorer performance."—*H. Cason* (Wisconsin).

3334. **Wirth, W. [Ed.] Register zu Band 51–75.** (Index of Volumes 51–75.) *Arch. f. d. ges. Psychol.*, 1931. Pp. 32.—*R. R. Willoughby* (Clark).

3335. **Woodworth, R. S. Contemporary schools of psychology.** New York: Ronald Press, 1931. Pp. vi + 232. $2.50.—This book is based on the author's course of lectures at Columbia entitled "A Survey of Contempory Psychology." After a short historical introduction the schools presented are: introspective, behavioristic, Gestalt, psychoanalysis and related schools, and hormic. According to Woodworth the members of these schools do not comprise the majority of psychologists, who belong to a middle-of-the-road group, where the author places himself. The book, in general, aims at exposition rather than criticism. An appendix of suggested readings is attached.—*P. E. Huston* (Worcester State Hospital).

[See also abstract 3378.]

SENSATION AND PERCEPTION

3336. **Adams, E. Q., Barnes, E. T., & Forsythe, W. E. Erythema due to ultraviolet radiation.** *J. Opt. Soc. Amer.*, 1931, 21, 207–222.—Application of the incomplete data now available on erythemal effectiveness to radiant energy from the sun and from various artificial sources.—*D. B. Judd* (Bureau of Standards).

3337. **[Anon.] Report of Committee on Acoustical Standardization.** *J. Acoustical Soc.*, 1931, 2, 311–324.—A definition of terms used in various branches of acoustics.—*P. E. Huston* (Worcester State Hospital).

3338. **Berg, F. Über die mittlere Form der vorderen Hornhautfläche.** (The average form of the anterior surface of the cornea.) *Acta Ophth.*, 1931, 9, 53–67.—Vertical sections of the anterior cornea showed more asymmetry than horizontal sections. The average form of the vertical section showed a greater curvature above than below the horizontal axis. The horizontal axis of symmetry is usually a few mm. from the axis of the ophthalmoscope. These normal asymmetries may be related to pressure from the eyelid, just as abnormal pressure from the eyelid may cause a functional astigmatism.—*M. B. Mitchell* (Yale).

3339. **Guild, S. R., Crowe, S. J., Bunch, C. C., & Polvogt, L. M. Correlations of differences in the density of innervation of the organ of Corti with differences in the acuity of hearing, including evidence as to the location in the human cochlea of the receptors for certain tones.** *Acta Oto-Laryngol.*, 1931, 15, 269–308.—A spiral graph was used to present data representing conditions of the cochlea in different regions. For 15 subjects the approximate total number of ganglion cells supplying the organ of Corti, the average number of ganglion cells per millimeter in the organ of Corti in the lower basal, upper basal, lower middle, and upper middle plus apical regions of the cochlea were counted. The rela-

tive number of ganglion cells per millimeter could then be calculated. The average total number of ganglion cells and the average number for each region was greater for three children than for four young adults. Corresponding with the least amount of energy required for stimulation for tones in the middle range, around 1500 cycles per second, the ganglion cell count was greatest in the upper basal turn and the adjacent lower middle turn of the cochlea. In the cases with loss of acuity for high tones, the innervation of the lower basal region was abnormally low. The one subject very hard of hearing for all tones had a low count throughout. Two cases are presented in detail to show the correlation of density of innervation with acuity of hearing. Localization of the receptors for tones in the cochlea was made for those near c^5, c^6, and all tones above c^6. In four cases with conductive lesions the loss of acuity was proportionately greater for tones of the middle and high ranges than for the lower.—*M. B. Mitchell* (Yale).

3340. **Guilford, J. P. Some empirical tests of the method of paired comparisons.** *J. Gen. Psychol.*, 1931, 5, 64–77.—"A comparative study of Thurstone's method of deriving scale-values from data obtained by the method of paired comparisons and that of the writer was made by using data which was obtained from lifted weights. The reliability of the methods is measured by correlating the scale-values with the logarithms of the stimuli. Certain assumptions made about the *G*-method were tested empirically and found to be valid. The effect of reducing the number of standard stimuli was tested for both methods. In most respects the *G*-method proved to be the more convenient and valid method, but it has one weakness in that the unit is a variable factor. Suggestions are made for future practice in the scaling of psychological values."—*H. Cason* (Wisconsin).

3341. **Herzl, M. A hang kettös élete.** (The double life of tones.) *Magyar psychologiai Szemle*, 1930, 3, 128–132.—The author touches on a group of unsolved problems in the field of musical hearing and reproduction. He shows that in musical practice not only the physically pure tones are used for tuning, but also there is a psychological pitch. With respect to pitch the ear is satisfied by close agreement—a fact which can be explained on the basis of Ranschburg's law of fusion. The differentiation of the treatment of the leading tone and the components in the consonant clang, leads the author to the discovery of the "double nature" of the tone. He differentiates a *movement element*, the continual rising of the tone-sequence, which he designates as melodic, and the *stability element*, which assigns the tone its stable place in the harmonic chord. A glance at the history of musical development shows the gradual retreat of the harmonic factors in favor of the melodic principle.—*D. E. Johannsen* (Rochester).

3342. **Jacques, P. Contribution a la physiologie normale et pathologique de l'oreille moyenne.** (A contribution to the normal and pathological physiology of the middle ear.) *Acta Oto-Laryngol.*, 1931, 15, 308–311.—The freedom of vibration in the round window rather than in the oval window seems essential for hearing, in spite of the popular theories of audition. This is shown in cases of exudative catarrh, when audition is not recovered until the round window has become liberated enough to vibrate. Similarly the therapeutic application of a cotton ball saturated with glycerine applied to the oval window gives little or no improvement, but when applied to the round window often gives a decided improvement in hearing.—*M. B. Mitchell* (Yale).

3343. **Judd, D. B. Extension of the standard visibility function to intervals of one millimicron by third-difference osculatory interpolation.** *J. Opt. Soc. Amer.*, 1931, 5, 267–275.—*D. B. Judd* (Bureau of Standards).

3344. **Klopsteg, P. E. A curious color phenomenon.** *Science*, 1931, 73, 590.—A neon tube bent in the shape of a grid and placed behind a ground glass screen is caused to flash at various frequencies up to twenty-five per second. At the upper frequencies the light is nearly continuous and the color that of the typical neon advertising sign. When the frequency is gradually reduced, at a frequency of twelve or ten flashes per second fringes of color appear around the edges of the screen. These colors (blue, green, bright red and yellow) are different from the normal neon color. They shift continuously. At a frequency of about seven per second the colors flicker over the entire screen, with the regular neon color predominating in the background. At a frequency of three or four flashes only the neon color remains. Similar results were obtained around the edges of the rotating blades of a fan placed before the screen and with a neon tube without the glass screen. A number of observers agreed upon the description of the phenomena.—*B. Casper* (Clark).

3345. **Leiri, F. Über die Perzeption der ultramusikalischen Töne.** (On the perception of ultramusical tones.) *Acta Oto-Laryngol.*, 1931, 15, 260–268.—The author states that only the ultra-musical tones are transmitted through the resonance of the basilar membrane. These waves enter the inner ear by way of the round window.—*M. B. Mitchell* (Yale).

3346. **Munn, N. L., & Geil, G. A. A note on peripheral form discrimination.** *J. Gen. Psychol.*, 1931, 5, 78–88.—Apparatus was devised to study "whether human subjects could discriminate between certain forms by means of peripheral vision when the conditions of experimentation were as well controlled as we could devise. If the human subject could discriminate with peripheral vision, what combination of forms could be most accurately discriminated? . . . Under our conditions there was good evidence of peripheral form discrimination. The retinal distribution of light emitted by a form was an important factor determining the distance from the fovea at which it could be discriminated. The triangle had an average field of 55°, while a hexagon

of the same area and brightness had a field of only 26°. The rectangle, square, diamond, and circle had fields, respectively, of 35°, 46.5°, 46°, and 44.5°. Analysis of the errors of report shows that the triangle was most accurately and the hexagon least accurately reported. The extent of the form field was greater on the horizontal than on the vertical meridian, but there were more erroneous reports on the horizontal than on the vertical meridian. The average extension of the field of vision for light alone ranged from 75.5° to 79.3° for our four subjects. The field of vision was restricted in the forehead region."—*H Cason* (Wisconsin).

3347. **Mygind, S. H. Le bourdonnement de l'oreille.** (Buzzing in the ear.) *Acta Oto-Laryngol.*, 1931, 15, 426–432.—Intracellular edema in the organ of Corti is probably the cause of buzzing in the ear. The resulting displacement between the Deiters cells and the hair cells releases the acoustic irritation. The more diffuse the edema, the more diffuse the buzzing. When the intralabyrinthine pressure is greater than the edema there is no swelling of the sensory epithelium or buzzing.—*M. B. Mitchell* (Yale).

3348. **Noyes, W. A. Color.** *Science*, 1931, 73, 496.—Color perception is conditioned upon (1) periodicity of electron motion in the source of light, (2) conservation of periodicity during transmission, (3) absorption by the colored body of periodicities other than that characteristic of the given color, (4) conservation of periodicity during transmission to the eye, and (5) focussing upon the retina.—*R. R. Willoughby* (Clark).

3349. **Perekalin, W. E. Über die akustische Orientierung.** (Sound orientation.) *Zsch. f. Hals-Nasen- u. Ohrenhk.*, 1930, 25, 442–461.—(*Biol. Abst.* V: 11022).

3350. **Roorda, P. Die Resonanz von Tönen in den Meermuscheln.** (Resonance of tones in seashells.) *Acta Oto-Laryngol.*, 1931, 15, 312–318.—A humming is heard in seashells when there are outside noises, but not in a sound proof room. The pitch of the noise depends roughly upon the size of the shell; large shells resound with a low pitched tone, and small shells with a high pitched tone. More exactly the fundamental tone depends upon the volume of the shell, the area of the opening, and a constant determined by the shape of the shell. In addition to the fundamental tone, overtones, neighboring tones, and tones with 2 or 3 times as many vibrations can also be heard. Photographs and tables of data on four series of shells are given as illustrations.—*M. B. Mitchell* (Yale).

3351. **Sabine, P. E. Sound transmission coefficients and reproduction factors.** *J. Acoustical Soc.*, 1931, 2, 506–513.—The conclusions of this article which are of interest to psychologists are: sound insulating properties of wall are dependent upon the particular frequencies involved; Buckingham's analysis of the effect of reverberation holds; and the average sound reduction afforded by a construction is independent of the area of the test panel when the ratio of absorbing power in the test room to the cross section of the transmitting panel is the same in the two cases.—*P. E. Huston* (Worcester State Hospital).

3352. **Schaare, M. Vergleichende Untersuchungen an Frauen über Lageempfindung im Raume (horizontale Sitzlage) und etwaige Veränderungen derselben im Verlaufe des mensuellen Zyklus.** (Comparative studies on the perception of position in space (horizontal seated position) in women and changes in the course of the menstrual cycle.) *Zsch. Geburtsh. u. Gynäkol.*, 1930, 97, 235–256.—(*Biol. Abst.* V: 11049).

3353. **Schiller, P. A sajtóhibak keletkezésének pszichológai oknyomozása.** (Psychological investigation of typographical errors.) *Magyar psychologiai Szemle*, 1930, 3, 19–38.—The author classifies typographical errors as follows: (1) Perceptive errors; senseless, grammatical, sensible illusions. (2) Apperceptive (central) errors; perseveration, creative inhibition, qualitative inhibition (Ranschburg's phenomenon), contamination, transposition, frequency (associative inhibition). (3) Disturbances in procedure: motor technical errors.—*D. E. Johannsen* (Rochester).

3354. **Sivian, L. J., Dunn, H. K., & White, S. D. Absolute amplitude and spectra of certain musical instruments and orchestras.** *J. Acoustical Soc.*, 1931, 2, 330–371.—A report of the distribution of auditory amplitude and frequency of musical selections played by individual instruments and orchestras for the purpose of giving information on the design of electrical and radio transmission systems. —*P. E. Huston* (Worcester State Hospital).

3355. **Stewart, G. W. Problems suggested by an uncertainty principle in acoustics.** *J. Acoustical Soc.*, 1931, 2, 325–329.—An uncertainty principle in acoustics is postulated, "that $\Delta v \cdot \Delta t \sim I$, where v is the intrinsic frequency of an acoustic signal and Δt is time duration. This principle is consistent with experiments on the change in frequency in the vibrato and the failure to detect it by ear, with recorded tests on minimum perceptible differences in frequency, and with the minimal time for tone perception." Three experimental problems are suggested. —*P. E. Huston* (Worcester State Hospital).

3356. **Whitely, P. L., & Anderson, J. C. The influence of two different interpolations upon time estimation.** *J. Gen. Psychol.*, 1930, 4, 391–401.—College students were used as subjects in a study of the influence of two conditions, (1) a non-rhythmical buzzer tone, and (2) music of a decidedly rhythmical character, on the estimation of short time intervals. The results suggested that intervals filled with music are judged shorter than intervals filled with the non-rhythmical buzzer tone or intervals in which neither the music nor the buzzer tone is present.—*H. Cason* (Wisconsin).

3357. **Wolf, S. K., & Sette, W. J. Acoustic power levels in sound picture reproduction.** *J.*

Acoustical Soc., 1931, 2, 384–398.—An experimental and theoretical consideration of desirable loudness levels in auditoriums and the power output of the reproducing equipment. Curves are presented to show the relation between acoustic power levels and auditorium volume and electrical power.—*P. E. Huston* (Worcester State Hospital).

[See also abstracts 3318, 3319, 3325, 3332, 3374, 3381, 3501, 3520, 3540.]

FEELING AND EMOTION

3358. **Korner, O. Die Angst.** (Anxiety.) *Zentbl. f. Psychotherap.*, 1931, 4, 210–216.—An Indian creation myth describes fear as arising from the spirit's first realization of its existence in the unknown void, and the overcoming of fear by the identification of the spirit with the world about it. Fear appears in animals and man when an unfamiliar object is seen, and an anxiety state, a sense of being lost, arises from a feeling of strangeness and emptiness. Man can be protected from this only through the religious experience of discovering God behind the secret of the world.—*M. Lee* (Chicago).

3359. **Mandeville, S. La timidité et l'attention.** (Timidity and attention.) *Psychol. et vie*, 1931, 5, 54–55.—Timidity implies an alteration of attention, because it presupposes a poor adaptation to reality. The timid person is inattentive, like an obsessed person, because obsession is the fear of appearing ridiculous.—*Math. H. Piéron* (Sorbonne).

[See also abstracts 3364, 3430, 3573.]

ATTENTION, MEMORY AND THOUGHT

3360. **Blumenfeld, W. Urteil und Beurteilung.** (Judgment and the judging process.) *Arch. f. d. ges. Psychol.*, 1931, Ergbd. 3, Part I, 1–336; Part II, 337–623.—The author presents an exhaustive theoretical and experimental critique of the judging process. Approximately one half of Part I is given over to a critique of theories of judgment held by philosophers, logicians and psychologists. The remainder of Part I and the whole of Part II are devoted to an attempt to discover the general principles and laws governing the various phenomena of judgment. In Part I the author considers the genetic development of judgment, drawing heavily from the writings of Stern, Bühler, Piaget and others. This is followed by a study of judgment in adults. The material utilized is drawn from studies on the distribution of teachers' estimates. Another type of material is drawn from studies of the judgments of employers (summarized in the first pages of Part II). The remainder of Part II is given over to a more detailed study of the factors which influence estimates of the relative excellence of mechanical drawings and to the possible relationship the judging process bears to the Weber-Fechner law. With reference to the genetic development of judgment it is held that identification and naming of objects is the first sign of judgment in children. This is present with the acquisition of language. Qualitative judgments, judgments of relation and of similarity are also found at about the same time. Comparative judgments, on the basis of which objects can be arranged according to some common characteristic, appear at about three years. The use of superlative and esthetic judgments occurs in the fourth year. Causal, conditional and final relations appear about the middle of the third year. Negative judgment appears earlier than positive, at approximately two years. Judgments which indicate the presence of foresight are present in the pre-pubertal years. Teachers' estimates usually conform to the normal curve, although there are frequent deviations. A study of the factors which govern teachers' estimates reveals something of the complex nature of the judging process. Teachers' estimates are a function of the age and sex of the student, being more severe in the case of the older as compared to the younger, and more severe if the student is a boy. More severe judgments are made by the practiced teacher than the unpracticed. Other factors influencing teachers' estimates are: the nature of the task to be judged, the purpose of the estimate, the degree of acquaintance with the student, etc. Somewhat similar findings manifest themselves in the vocational field. Judgments are very infrequently located at either extreme of the scale and the distribution is most frequently skewed toward the lower end. Judgments of vocational ability are found to vary with the number of steps in the scale and all other conditions imposed on those judging. In the study of mechanical drawings it is found that the number of deviations of the line from an ideal line of the judge, the likelihood of illusion, the number of classes allowed, the individuality of the judge, and other subjective factors affect the result. The Weber-Fechner law does not hold satisfactorily in the field of judgment without considerable revision and reinterpretation, which latter is, however, facilitated by the author's analysis. A bibliography of 209 titles accompanies the study.—*R. H. Waters* (Arkansas).

3361. **Carr, H. A. The laws of association.** *Psychol. Rev.*, 1931, 38, 212–228.—The terms "association" and "laws of association" have lost caste, but if correctly used to include sensori-motor as well as ideational connections, they cover "conditioning" and every other principle of learning. In fact, the entire problem of the conditions determining the formation and functional efficiency of stimulus-response connections belongs under this topic. The techniques worked out for handling this topic are the "laws of association." The author argues that the laws need expanding and reclassifying. He suggests: (1) a distinction between the "descriptive" laws and "explanatory" laws; i.e., instead of "reducing" similarity and contrast to contiguity, the former should be labelled "descriptive" and the latter "explanatory"; (2) an increase in the number of descriptive laws; (3) a division of the explanatory laws into three classes, (a) those explaining the *origin* and *formation* of the stimulus and response connections, as "contiguity"; (b) those

explaining the relative *strength* of these connections, as frequency, vividness, etc., and (c) those explaining their variability of functioning, as James' principle of emotional congruity. Each of these classes of explanatory laws should be expanded: (a) origin has been explained by contiguity, but contiguity should be defined as some degree (yet to be determined) of temporal proximity between the two organic processes that get connected. And there should be added to it the principle that an active attitude, i.e., motor activity, on the part of the organism is essential to the formation of associations, whether sensory, motor, or ideational. The author suggests a second additional principle to explain cases in which association occurs without temporal proximity, due to a high degree of similarity between conditioned and unconditioned stimulus. This principle he calls the law of assimilation.—*A. G. Bills* (Chicago).

3362. **Hartmann, G. W. The concept and criteria of insight.** *Psychol. Rev.*, 1931, 38, 242–253.—"Current investigations and analyses of insight suffer from a lack of clear-cut conceptions and definite criteria for recognizing the experience." A shift of meaning and application has occurred. The term far antedates configurational psychology. Originally, it was applied only to learning, and its criterion was the occurrence of complete solutions with reference to the total organization of the field. Now, as used by Gestalters, it signifies the formation of any new but adequate configuration. Criteria given by Yerkes, Bingham, Köhler, etc., are quoted. Although originally applied to human behavior, the concept was seized upon by animal psychology before it was adequately defined in the human. Our greatest present need is knowledge about the operation of insight in the human, the absence of which constitutes an effective check to progress in the animal field. A representative series of inquiries is appended, which must be undertaken before a suitable theory of insight can be proposed.—*A. G. Bills* (Chicago).

3363. **Luh, C. W. The avoidance of repetitive responses.** *Psychol. Rev.*, 1931, 38, 276–279.—The author criticizes the theory of refractory phase as applied to Thorndike's experiment, demonstrating that subjects asked to write a number as often as they received a stimulus, tended to avoid repetitions in proportion to the temporal nearness of the successive stimuli. He repeated the experiment, using as stimuli (1) taps on the table at regular intervals of 1, 2, 4, and 6 sec., (2) taps presented irregularly, and (3) letters at irregular intervals. The results were studied for forward and backward sequences of numbers in the responses as well as repetition. They show (1) a tendency to avoid repetitions in 5 out of 6 subjects, but not to avoid sequences; (2) the three kinds of sequences all decrease in number with increase in interval, except with letters as stimuli, when the reverse occurs. The author concludes that the refraction phase in its strict physiological sense cannot explain the avoidance of repetition, but that it is due to some mental set imparted by the directions.—*A. G. Bills* (Chicago).

3364. **Meltzer, H. Sex differences in forgetting pleasant and unpleasant experiences.** *J. Abn. & Soc. Psychol.*, 1931, 25, 450–464.—Following a Christmas vacation, 132 individuals were asked to list and briefly describe all their experiences of the vacation period, marking each experience that was pleasant with a "P" and those which were unpleasant with a "U." Six weeks later, without warning, the same individuals were asked to repeat the procedure. In the general tendency toward happiness or unhappiness as indicated by algedonic differences—the difference between the total percentage of pleasant and unpleasant experiences on first recall—there was statistically reliable difference of 8.5% in favor of women tending towards happiness. An analysis of the percentages of pleasant, unpleasant and total experiences forgotten indicated: (1) both men and women forget larger percentages of unpleasant than pleasant, (2) men forget 3.18% more pleasant experiences than women, (3) women forget 3.22% more unpleasant experiences than men.—*C. H. Johnson* (Boston Psychopathic Hospital).

3365. **Spearman, C. Creative mind.** London: Nisbet, 1930. Pp. xii + 153. 5/.—For abstract see V: 2827.—*F. C. Bartlett* (Cambridge, England).

[See also abstracts 3359, 3480, 3528, 3530, 3536.]

NERVOUS SYSTEM

3366. **Gasser, H. S. Nerve activity as modified by temperature changes.** *Amer. J. Physiol.*, 1931, 97, 254–270.—"The duration of the rising and falling phases of the spike of the action potential are affected to the same extent by temperature change. A simplified method of measuring the constants of the axon action potential is described. The product of the velocity and the duration of the rising phase is not a constant; but this fact does not militate against the hypothesis that conduction is mediated through local bioelectric currents. The magnitude of all the temperature coefficients increases greatly in the lower temperature range. This is particularly true in the case of the spike potential. An analogous behavior of the temperature coefficients of viscosity of fats, paraffins, and lecithin, is described and the suggestion made that the explanation of the high biological coefficients at low temperatures may be connected with viscosity of the plasma membrane."—*Z. Piotrowski* (N. Y. Psychiatric Institute).

3367. **Herrick, C. J. An introduction to neurology.** (5th ed.) Philadelphia: Saunders, 1931. Pp. 417. $3.00.—The chapters on the neuron, reflex circuits, and the general physiology of the nervous system have been entirely rewritten to take cognizance of the recent advances in these fields. Some indication of the change of emphasis from reflex units to patterned behavior may be gained from the following quotation, with which Herrick now concludes his chapter on reflex circuits: "The adult behavior pat-

tern has not been built up by assembling separate movements which were originally provided as elementary simple reflexes, but each stage in the development of a reaction has grown out of an earlier and simpler stage in which there is perfect coordination. The body is an integrated whole from the beginning of its development, and the local reflexes emerge from a more generalized type of behavior of the body as a whole. They are not primary elements of behavior, but on the contrary they mark a rather advanced stage of differentiation." All of the chapters have been revised and the bibliographies following each chapter are brought up to date.—*N. L. Munn* (Pittsburgh).

3368. **Hill, A. V. The maintenance of life and irritability in isolated animal tissue.** *Nature (Lond.)*, 1929, 123, 723–731.—(*Biol. Abst.* V: 10835).

3369. **Lashley, K. S. Cerebral control versus reflexology: a reply to Professor Hunter.** *J. Gen. Psychol.*, 1931, 5, 3–20.—"I have published and stressed a series of experiments and observations which seemed to support the theory of cerebral equipotentiality or mass action. . . . [Hunter] has ignored it entirely and has proposed . . . an alternative theory. . . . In reply I have restated the evidence upon which I based the rejection of his theory."—*H. Cason* (Wisconsin).

3370. **Newman, I. Neurone-mechanisms in sanity and insanity.** *J. Abn. & Soc. Psychol.*, 1931, 25, 424–435.—Using the term *complexes* to describe interlinked neuron groups, it is found that for every complex there usually is an antagonistic complex with which it is related. Considering the two as a unit, it might be said that each complex is bipolar. There is evidence to show that the poles of a complex are usually so interrelated that the cessation of the activity of one constitutes the stimulus for the opposite pole. Sleep is an example of this interreaction in the sane. According to some physiologists sleep is brought about by the blocking of the impulses at the synapses. Assuming this to be identical with increased resistance, the transition stage between wakefulness and sleep is the fading out of the stimuli in the conscious field. A comparison between dementia praecox and the twilight state of sleep shows that in either there is found indifference, apathy, irritability, diminished ability to acquire new knowledge and poor reasoning. Other states of antithetic reciprocity in sanity and insanity are described.—*C. H. Johnson* (Boston Psychopathic Hospital).

3371. **Robinson, M. F. Is the refractory phase theory adequate to explain mental fatigue?** *Psychol. Rev.*, 1931, 38, 229–241.—The currently accepted theory of cumulative refractory phase is inadequate to explain mental fatigue because: (1) physiologically its rapid and constant operation implies a rigidity of cortical organization that is difficult to reconcile with Lashley's findings regarding cerebral function; and (2) it is over-elaborate to account for avoidance of repetition, the plastic and powerful nature of shifting motivation, and the complex phenomena of partial automatization. The author offers, as an alternative theory, a "general activity" hypothesis. It assumes (1) a general tendency toward wide-spread cortical activity, which ordinarily prevents the occurrence of refractory phase; (2) a tendency to integrate other patterns with the activated cortical pattern, if it is unrestricted, giving the total integration a considerable duration; (3) where the activated pattern is limited in extent, a tendency to rapid shifting to other patterns, till practice effects an integration with dominant ones.—*A. G. Bills* (Chicago).

3372. **Schmitt, F. O., & Schmitt, O. H. A. The nature of the nerve impulse. II. The effect of cyanides upon medullated nerves.** *Amer. J. Physiol.*, 1931, 97, 302–314.—The oxygen consumption of resting nerves of the green frog may be practically completely inhibited by cyanides.—*Z. Piotrowski* (N. Y. Psychiatric Institute).

3373. **Wernöe, T. B. Durch bimanuelle, faradische Reizung hervorgerufene striäre Reflexe an den oberen Extremitäten.** (Striatic reflexes of the upper extremities produced by bi-manual faradic stimulation.) *Acta psychiat. et neur.*, 1931, 6, 107–118.—From a lecture before the Danish Neurological Society; discussion of experiences with the method. Biography of 20 titles.—*M. L. Reymert* (Moosehcart Laboratory for Child Research).

3374. **Wever, E. G., & Bray, C. W. Action currents in the auditory nerve in response to acoustical stimulation.** *Proc. Nat. Acad. Sci.*, 1930, 16, 344–350.—(*Biol. Abst.* V: 11052).

[See also abstracts 3377, 3401.]

MOTOR PHENOMENA AND ACTION

3375. **Cleminson, F. J. Limb responses to semicircular canal stimulation in man.** *Acta Oto-Laryngol.*, 1931, 15, 393–397.—McNally and Tait found that particular limb responses to sudden movements in frogs depended upon the functioning of particular semicircular canals. For instance, if the left anterior semicircular canal were destroyed, the frog would not make righting movements with the left foreleg, but would fall over when pushed in that direction. The case reported here on one human subject confirmed these findings. The subject, who had recently become deaf in the left ear and gave no response to caloric labyrinthine tests on the left side, fell readily to the left when pushed on that side, but not to the right. Although the hearing and caloric tests showed no improvement, compensation was made in some way, for there was no falling when tested three months after the onset.—*M. B. Mitchell* (Yale).

3376. **Darrow, C. W. The galvanic skin-reflex and finger volume changes.** *Amer. J. Physiol.*, 1929, 88, 219–229.—The galvanic skin reflex or electrical changes as well as vasomotor changes of the skin follow bodily excitation. The galvanic reflex, therefore, has been regarded as an effect of either con-

striction or relaxation of the blood vessels. The author's experiment has shown that only infrequently there is an increase in finger volume unattended by a rise in blood pressure. Thus the evidence of relaxation of the vessels is ambiguous in most cases. On the other hand, evidence of an independent quantitative variation of volume and electrical changes in the same parts led the author to the conclusion that vasoconstrictor and electrical changes are related phenomena but only as functions of common stimulating conditions.—*Z. Piotrowski* (N. Y. Psychiat. Inst.).

3377. **De Kleyn, A., & Schenk, V. Ueber den Reflexbogen des vestibulären Augennystagmus beim Menschen.** (The reflex arc of the vestibular eye nystagmus in man.) *Acta Oto-Laryngol.*, 1931, 15, 439–450.—Experimentation on a case of an anencephalic child confirmed experimental results with lower animals. Both slow and rapid components of a vestibular nystagmus were found even though an anatomical examination showed the absence of a cerebrum, cerebellum, and the absence of all but one ocular muscle in each eye (the external rectus), one ocular muscle center (the nucleus abducens), and one ocular muscle nerve (the abducens). The reflex arc of the vestibular eye nystagmus in man then is: peripheral labyrinth, vestibular nerve, vestibular nucleus, abducens nucleus, abducens nerve, and external rectus muscle.—*M. B. Mitchell* (Yale).

3378. **Drury, M. B. Can *Gestalt* theory save instinct?** *J. Gen. Psychol.*, 1931, 5, 88–94.—The author argues that *Gestalt* theory can save instinct.—*H. Cason* (Wisconsin).

3379. **Johnson, A., & Johnson, V. Attempted autotransplantation of the adrenal cortex.** *Amer. J. Physiol.*, 1931, 97, 392–395.—The dog was chosen as the experimental animal because accessory adrenal glands are very rare. The authors were uniformly unsuccessful in attempts to autotransplant the adrenal cortex of 46 dogs to the thyroid, omentum, testis, kidney and liver.—*Z. Piotrowski* (N. Y. Psychiatric Institute).

3380. **King, C. E., Blair, E. A., & Garrey, W. E. The inspiratory augmentation of proprioceptive reflexes. A study of the knee jerk and the Achilles reflex.** *Amer. J. Physiol.*, 1931, 97, 329–342.—The respiratory center constantly discharges, rhythmically, a succession of impulses which excite to activity a large group of muscles. These impulses irradiate to other parts of the central nervous system and through them modify the activities of skeletal muscles not concerned in respiration. The authors present data which demonstrate that with each inspiration in normal breathing the knee jerk and the Achilles reflex are augmented. The augmentation is not demonstrable in all subjects and animals, nor in the same one at all times. There is no increase in the knee jerk during normal expiration, but during forced breathing there is some evidence of a slight increase. —*Z. Piotrowski* (N. Y. Psychiatric Institute).

3381. **Piéron, H. Conditioned reflex and perception: the concept of syncretism.** *J. Gen. Psychol.*, 1931, 5, 42–52.—Discussion of Pavlov's theories and some results on perception. "The behavior of the animal is not the function of an isolated stimulation of some cortical receptor-neuron, but of a whole series of simultaneous and immediately preceding stimulations, the function being determined by the integration of all of its past experiences. Theoretically, one is able to isolate a stimulation from a totality, but for that reason it does not necessarily mean that it will act in an isolated manner in the organism studied; it is only by prolonged experimental reinforcement that we can give to this stimulus, in certain definite circumstances . . . a preponderance over all the rest of the perceptive complexes sufficiently great to permit it to act as though it were alone and thus to appear abstracted by analysis."—*H. Cason* (Wisconsin).

3382. **Pottenger, F. M. Principles which govern reflex action in disease.** *Calif. & Western Med.*, 1929, 30, 23–29; Reprinted under same title, *J. Organotherap.*, 1931, 15, 139–144.—The author sets forth the principles of minimal stimulation, Sherrington's principles of segmental proximity and of the spread of the reflex action, together with a statement of his own to the effect that changes in the internal viscus are reflected in skeletal reflex action. On this basis he shows how certain clinical symptoms may be better understood by the therapist.—*C. Landis* (N. Y. Psychiatric Institute).

3383. **Riddle, O., & Krizenecky, J. Studies on the physiology of reproduction in birds. XXVIII. Extirpation of thymus and bursa in pigeons with a consideration of the failure of thymectomy to reveal thymus function.** *Amer. J. Physiol.*, 1931, 97, 343–352.—The complete extirpation of thymus and bursa Fabricii had no effect on time or age at which ten female pigeons became sexually mature. These birds produced eggs whose envelopes were quite normal, with only a single exception; there were no soft-shelled eggs. Soli's report of soft shelled eggs as a result of thymectomy in mature fowls is questioned. No clear and consistent difference was found in weight of testes (in 7 operated males), ovaries, thyroid, liver or spleen in operated and control. The authors, therefore, conclude that tissue with "thymic function" is probably widely scattered in the body of vertebrate animals generally; this is more evident in birds than in other groups.—*Z. Piotrowski* (N. Y. Psychiatric Institute).

3384. **Ring, G. C. Adrenalin and the metabolism of exercise.** *Amer. J. Physiol.*, 1931, 97, 375–385.—The author's experiments show that without previous fatigue, small doses of adrenalin (0.001–0.002 mgm. per 100 gms.) produce a rise in metabolism and that after fatigue these same doses produce a fall in metabolism. Large doses always produce a rise in the metabolism of exercising rats. With small doses fatigue seems to throw out of action the calorigenic mechanism of rest. The adrenalin may make possible a greater expenditure of energy in an emergency

without a corresponding increase in oxygen intake. In man, as in rat, physiological amounts of adrenalin (0.5 mgm. per person) given after fatigue cause a lowering of the respiratory metabolism of exercise.—*Z. Piotrowski* (N. Y. Psychiatric Institute).

3385. **Scheidemann, N. V., & Colyer, H. A study in reversing the handedness of some left-handed writers.** *J. Educ. Psychol.*, 1931, 22, 191–196.—A series of 9 tests was given to 16 left-handed writers in Grade 2B. It was found that 10 of these writers should be using the right hand. With the consent of the parents, a reversal of handedness was produced by individual training. In these cases the original use of the left hand seemed, where evidence was available, to be influenced by the left-handedness of other people.—*J. A. McGeoch* (Missouri).

3386. **Schmaltz, G. 1. Versuche über den Einfluss der Stellung von Kopf und Hals zum Stamm.** (Investigation of the influence of the position of the head and neck on the trunk.) **2. Ueber einen von der Bauchhöhle auslösbaren Bein-Flügel-Reflex bei der Taube.** (One of the leg-wing reflexes elicitable by the abdominal cavity in pigeons.) *Acta Oto-Laryngol.*, 1931, 15, 547–549.—*M. B. Mitchell* (Yale).

3387. **Schmidt, F. Az elemi egyszerüségu munka kiserleti lélektani vizsgálata.** (The experimental investigation from the psychological point of view of simple elementary hand-work.) *Magyar psychologiai Szemle*, 1930, 3, 39–74.—The object of the present experiment was to analyze psychologically the capacities of normal school children in handicrafts, and to compare the results with each other and with school progress and chronological age. For successful performance a certain hand and finger dexterity as well as a feeling for material and tools were found to be essential. In order to evaluate the individual's performance it was found necessary not only to take into consideration relative speed and quality, but also to compare the individual's performance with that of the group. Sex differences appeared. The better hand-work was done by the pupils with the better scholastic standing. Performance improved with age, except that in threading a needle the boys became worse with age. It is suggested that such simple tasks may well offer possibilities in the field of vocational prognosis, and for the differentiation of the physically and mentally inferior.—*D. E. Johannsen* (Rochester).

3388. **Schneider, E. C. A study of responses to work on a bicycle ergometer.** *Amer. J. Physiol.*, 1931, 97, 353–364.—"One of the outstanding problems of the body during physical exertion is that of supplying an adequate amount of oxygen to the active muscles. A linear relationship between the amount of oxygen absorbed and the load of work was maintained by all subjects during moderate exertion. As the load was stepped up by equal increments in four of six cases, the linear relationship was broken soon after the crest-load was passed."—*Z. Piotrowski* (N. Y. Psychiatric Institute).

3389. **Walshe, F. M. R. Physiological analysis of some clinically observed disorders of movement. II. The tremor rigidity symptom-complex.** *Lancet*, 1929, 1, 1024–1029.—(*Biol. Abst.* V: 11206).

3390. **Wolff, L. V. The response to plantar stimulation in infancy.** *Amer. J. Dis. Children*, 1930, 39, 1176–1185.—(*Biol. Abst.* V: 11053).

[See also abstracts 3309, 3397, 3399, 3514.]

PLANT AND ANIMAL BEHAVIOR

3391. **Allard, H. A. Our insect instrumentalists and their musical technique.** *Smithsonian Instit. Ann. Rep. Board Regents, 1928*, 1929, 563–591.—(*Biol. Abst.* V: 11017).

3392. **Bose, J. C. [Ed.] Life movements in plants.** New York: Longmans Green, 1931. Pp. 217. $7.20.—The author presents copious data to prove that the life activity of plants is the physiological activity of living cells, which activity is subject to modifications and influenced by all the factors which affect the physiological activity of other living tissue. The rise of sap in plants is not purely a physical process, but due to the pulsatory activity of living cells which function in peristaltic action similar to that found in animals. Special methods devised by the author and his students show the validity of the above thesis. Data are presented which show rhythmic pulsation in plants; characteristics of erectile responses in plants; the similarity between the transmission of waves of excitation in plants and animals; and the effect of poisons and temperature changes on the vital processes in plants.—*C. V. Hudgins* (Clark).

3393. **Denker, —. Über das Hörvermögen der Fische.** (The auditory capacity of fish.) *Acta Oto-Laryngol.*, 1931, 15, 247–260.—The review of the anatomy of the ear labyrinths of fish showed no cochlea to be present. The conflicting literature with regard to the ability of fish to hear was reviewed. The most important work was that of Von Frisch, who found positive evidence of hearing. By use of the extirpation method, he found the sense organs of hearing to be located either in the sacculus, lagena, or both, while the utriculus and ampullae did not function in this respect. De Burlett also found the sacculus to be the organ of hearing and to have little or nothing to do with the static sense. The author, on the basis of his own experimental work as well as on the literature, concluded that some fish are capable of hearing while others are not.—*M. B. Mitchell* (Yale).

3394. **Everly, R. T. Preliminary experiments on the jumping reactions of *Melanoplus differentialis* Uhler.** *Ohio J. Sci.*, 1929, 29, 309–315.—(*Biol. Abst.* V: 11019).

3395. **Gellermann, L. W. The double alternation problem: I. The behavior of monkeys in a double alternation temporal maze.** *J. Genet. Psychol.*, 1931, 39, 50–72.—After preliminary training 3 (2

surviving) *Macacus rhesus* monkeys were tested on the problem of turns RRLL in the temporal maze as previously used by Hunter with rats and with raccoons. Stages in the learning appeared: (1) when pauses and extra moves were prominent; (2) when these had disappeared; (3) when hesitations, swayings, and startings marked the choice responses. A definite tendency to simple alternation was evident before the set problem was mastered. Quantitative results showed a clear superiority of the monkeys over the raccoons studied by Hunter. After the problem had been mastered, control of exteroceptive cues was instituted by not moving the various doors of the apparatus. It was not determined definitely whether the monkeys could extend the double-alternation type of behavior beyond the problem set. It is held that Hunter's symbolic process hypothesis is supported by these results.—*J. F. Dashiell* (North Carolina).

3396. **Hanawalt, E. M. Whole and part methods in trial and error learning.** *Comp. Psychol. Monog.*, 1931, 7, No. 5. Pp. 65.—This is a criticism and repetition of Pechstein's experiment. Pechstein's experiment is criticized (1) because the maze was too small, (2) because the four sections were too similar, (3) because of the unequal illumination of the maze, and (4) because of the presence of the experimenter within the possible view of the animal. The author used a complex maze pattern of the "Shepard universal type." In all 15 white rats were used as subjects. These were all accustomed to maze-running before being used in this experiment. The rats were divided into two groups. One of these groups learned the maze by the whole method and then by the part method, the other learned it by the part method and then by the whole method. Throughout the experiment this form of procedure was followed in order to overcome the possibility of individual differences vitiating the comparative results. The maze was divided into four parts as in Pechstein's experiment. The pure part method involved learning the sections in the following order: Part 1, then 2, then 3, then 4, then 1–2–3–4. The progressive part involved Part 1, then 2, then 1–2, then 3, then 1–2–3, then 4, then 1–2–3–4. The direct repetitive part was Part 1, then 1–2, then 1–2–3, then 1–2–3–4. The reversed repetitive part was run in the order, Part 4, then 3–4, then 2–3–4, then 1–2–3–4. The results show the whole method to be superior to any of the part methods used (a result quite different from that of Pechstein). The improvement of the whole method over the part methods ranged in percentage from 23.9 to 44.5 when the criterion was total distance travelled. Other criteria gave similar results. The author says that "practice on parts and on part combinations before running the whole contributed to learning, but did not save enough to compensate for the extra energy required." She points out that breaking up the unity of the total pattern, increasing the number of separate acts, and learning in a direction opposite to that in which the learning must ultimately function, cause waste in part learning. "Compatibility of parts learned as parts when required to function with other parts or with the whole was not immediate, but required practice of the part in its new relationship. Trained learners did not acquire increasing facility in learning problems of similar type and of comparable difficulty. They had attained a considerable uniformity of performance." Bibliography of 31 titles.—*N. L. Munn* (Pittsburgh).

3397. **Herren, R. Y., & Fossler, H. R. Achilles and crossed flexion reflex time in the intact rat.** *Amer. J. Physiol.*, 1931, 97, 282–285.—"Light dosages of caffeine citrate lengthened Achilles reflex times but did not effect crossed flexion times; heavy dosages of caffeine citrate gave an Achilles reflex time similar to the normal but greatly shortened crossed flexion reflex time. Light dosages of alcohol shortened Achilles reflex time but did not affect crossed flexion reflex time, heavy dosages of alcohol lengthened Achilles reflex time and also greatly lengthened crossed flexion reflex time."—*Z. Piotrowski* (N. Y. Psychiatric Institute).

3398. **Hoagland, H. A study of the physiology of learning in ants.** *J. Gen. Psychol.*, 1931, 5, 21–41.—"The rate of conditioning of ants to a simple 'maze' is measured as a function of temperature. The rate of learning is unaffected by temperature from 15° to 25°, but is accelerated about 100% for the range of 25° to 29.4°, provided that the duration of exposure to the higher temperatures is not too long. Retention of learning after 18 hours is unaffected by temperatures below 25°. After exposures of 18 hours at 28.3° or 29.4° the ants not only 'forget' the solution of the maze but take many more than the initial number of trials to relearn it. Great retardation of learning is also found in control ants exposed to these temperatures."—*H. Cason* (Wisconsin).

3399. **Huizinga, E. De la réaction galvanique de l'appareil vestibulaire.** (The galvanic reaction of the vestibular apparatus.) *Acta Oto-Laryngol.*, 1931, 15, 451–466.—This investigation of the galvanic reactions of head and eye movements toward the anode in pigeons confirms the results of Jensen. Although the reaction was almost normal after extirpation of the labyrinths, it gradually diminished until only a weak reaction resulted from a strong stimulation, and finally vanished entirely. At autopsy degeneration of the eighth nerve and Scarpa's ganglion were found to explain this phenomenon. When the extirpation of one labyrinth was followed several months later by the extirpation of the other labyrinth, a normal reaction was obtained. After the extirpation of Scarpa's ganglion, the reaction was very poor. It was concluded, therefore, that "galvanic reaction is normally aroused by stimulating the vestibular nerve especially the peripheral neurons."—*M. B. Mitchell* (Yale).

3400. **Klüver, H. The equivalence of stimuli in the behavior of monkeys.** *J. Genet. Psychol.*, 1931, 39, 3–27.—Not satisfied with the description of animal behavior merely in terms of stimulus-response relationships, the author pleads for study of the

fundamental psychological mechanisms involved—sensory, emotional, etc.; and he states that the true "response" in many cases is not the mere muscular act. To study the method of equivalent stimuli the pulling-in technique was used, in which the monkey pulls in one of two boxes bearing different signals by means of a rope, or pulls in a single box to a certain point, when the signal appears to guide further action. The general procedure was: to train the animal to a differential response between two signals (e.g., rectangles of 300 and 150 sq. cm., or two buzzers of different loudness), then to test it on successive pairs of larger combinations of signals. In many of the tests the animals reacted to the new pairs in a way consistent with their previous training, and in some tests they did not. This leads to the distinction between equivalent and non-equivalent stimuli. Attention is also called to the fragility of such functions in the relational thinking of the monkey.—*J. F. Dashiell* (North Carolina).

3401. **Lashley, K. S. Mass action in cerebral function.** *Science*, 1931, 73, 245–254.—The analysis of the functions of the rat's visual cortex shows that (1) the function of pattern vision is specifically localized in the visual cortex; (2) the function of brightness discrimination is not specifically dependent on the visual cortex, although the visual cortex seems to exert a facilitating effect on subcortical visual centers involved in brightness discrimination; and (3) the absence of the visual cortex causes the threshold of brightness discrimination to be raised. Further analysis of the functions involved in maze learning shows that the degree of retardation brought about by cortical lesion is proportional to the amount of tissue destroyed and is not dependent on the locus of the lesion. From these results a hypothesis of cerebral function is set up which involves the combination of localization and decentralization theories; "from limited point to point correspondence of cells to a condition of absolute non-specificity." The interrelation of the two theories is such that one cannot choose between a strict theory of localization and a theory of decentralization. A much broader view must be taken which embodies the important facts of both theories.—*C. Neet* (Clark).

3402. **Mayer, B. A., & Stone, C. P. The relative efficiency of distributed and massed practice in maze learning by young and adult albino rats.** *J. Genet. Psychol.*, 1931, 39, 28–49.—Data amassed by giving different young and adult groups of rats 1, 3, 5, and 10 trials per day for a total of 30 trials on a multiple-T maze of 12 choices, are analyzed in much detail. Preliminary handling, equating of motivation by a program of weight reduction for the adults, and standardizing of interval between trials (20 minutes), were resorted to. Group performances are compared on several bases. Results on the young groups show almost no relation between massing of trials on the one hand, and on the other the number of forward-going errors, the number of trials necessary to meet a criterion of mastery, the percentage of errorless runs to the group, and the comparative difficulty of specific alleys; but for the early trials a positive relation was shown between massing and the number of retracings and also, consequently, in total running time. Results with the adult rats show direct correlations between massing of trials on the one hand, and on the other forward-going errors, retracings, and the number of trials required; an inverse correlation between massing and percentage of errorless runs; and in the early trials a positive relation between massing and the number of retracings as well as the running-time. Disregarding the factor of massing, the scores of the young animals of the 3- and 5-test groups were significantly superior to those of the adults; and a slight superiority appears also for the young of the 1-test groups. The results of this study corroborate those of Cook, and justify the practical conclusion that using rats of 1 and 2 months' age one may mass practice periods on multiple-T mazes without thereby introducing a disturbing factor.—*J. F. Dashiell* (North Carolina).

3403. **Merenda, P. Proposta d'uno studio sopra la permanenza nei bruti degli affetti tra generanti e generati.** (Proposal for a study of the permanence among the animals of affection between parents and offspring.) *Boll. soc. sci. nat. e. econ., Palermo*, 1928, 10, 17–21.—(*Biol. Abst.* V: 11020).

3404. **Parker, G. H. The color changes of the tree toad in relation to nervous and humoral control.** *Proc. Nat. Acad. Sci.*, 1930, 16, 395–396.—(*Biol. Abst.* V: 11021).

3405. **Pilkington Brothers, Ltd. Coloured glass as a deterrent to house flies.** *Nature* (*Lond.*), 1930, 125, 529.—(*Biol. Abst.* V: 11023).

3406. **Warden, C. J. Animal motivation; experimental studies on the albino rat.** New York: Columbia Univ. Press, 1931. Pp. xii + 502. $5.00.—This volume brings together the researches of Warden, T. N. Jenkins, M. Jenkins, Warner, Nissen, Hamilton, Holden and Aylesworth on animal motivation. Most of these researches have involved the "Columbia obstruction method" where the strength of a drive is measured in terms of the number of times in a given period an animal will cross an electrical obstruction (grid) to obtain water, food, copulation, etc., after varying periods of deprivation. The first section of the volume discusses the obstruction method. This is followed by a section on the hunger drive contributed by Warner and Hamilton. The next section, contributed by Warner, concerns the thirst drive. The fourth section presents the researches of Warner, M. Jenkins, and Nissen upon the sex drive; sections on the maternal drive and the exploratory drive are contributed by Nissen. Warden has written a short introduction to each of the above mentioned sections. The last section, written by Warden, is a discussion of the relative strength and persistence of the normal drives of the white rat. The rank order of the drives in the male was as follows: thirst, hunger, sex, explora-

tory. In the female, the maternal drive was strongest, followed in order by thirst, hunger and sex. Combined data manifested the following ranks: maternal, thirst, hunger, sex, exploratory. The differences in most cases were quite reliable. In an appendix four studies on motivation using methods other than the Columbia obstruction technique are printed. These concern the effect of starvation upon behavior (Holden), the effect of short intervals of delay in feeding upon speed of maze learning (Warden and Hamilton), the effect of delayed incentive on the hunger drive (Hamilton), and the relative value of reward and punishment in the formation of a visual discrimination habit (Warden and Aylesworth).—*N. L. Munn* (Pittsburgh).

3407. **Yamanouchi, T. Notes on the behavior of the holothurian *Caudina chilensis* (J. Müller).** *Sci. Rept. Tohoku Imp. Univ., 4th ser., Biol.*, 1929, 4, 73–115.—(*Biol. Abst.* V: 11028).

3408. **Yamanouchi, T. Reactions to centrifugal force in the holothurian *Caudina chilensis* (J. Müller).** *Sci. Rept. Tohoku Imp. Univ., 4th ser., Biol.*, 1929, 4, 521–532.—(*Biol. Abst.* V: 11029).

[See also abstracts 3372, 3386.]

EVOLUTION AND HEREDITY

3409. **Brintle, S. L. Mental and physical measurements of a set of twelve-year-old quadruplets.** *J. Genet. Psychol.*, 1931, 39, 91–112.—Photographs, health history, anthropometric measurements, results on intelligence and achievement tests, on trait rating blanks, and on extensive interest blank, are furnished in some detail. They seem to indicate that two of the quadruplets are identical twins and the other two like fraternal twins, the four having developed from three eggs. Since the four children were raised in practically an identical environment the persistence of likenesses and differences between the four throws support to the nature hypothesis as against the nurture.—*J. F. Dashiell* (North Carolina).

3410. **Conrad, H. S. On kin resemblances in physique *vs.* intelligence.** *J. Educ. Psychol.*, 1931, 22, 376–382.—Certain of Thorndike's conclusions regarding the resemblances of siblings in intelligence are examined critically. It is pointed out that the coefficient of kin resemblance which is obtained for intelligence "*depends to a marked extent on the number of tests which are merged into the total 'intelligence' score, and the intercorrelation of these tests.*" Certain statistical problems in the evaluation of kin resemblances are discussed critically.—*J. A. McGeoch* (Missouri).

3411. **Fleischl, H. The inheritance of marked sensitiveness.** *Eug. News*, 1931, 16, 59.—In a pedigree of fifteen blood-relatives, eight are described as "living at a high tension."—*R. K. White* (Stanford).

3412. **Krout, M. H. Heredity, environment, and developmental process.** *Psychol. Rev.*, 1931, 38, 187–211.—By an analysis of the implications of recent anti-Mendelian and anti-Weismannian trends in evolutionary theory, the author shows that the struggle between the biologist and the social scientist over the exclusive importance of heredity and environment, in the development of individuality, is futile. Heredity and environment, instead of being opposed, are both merged in the concept of "developmental processes"; i.e., the developing organism is a function of the relation between the protoplasm and its environment, not of one or the other independently. "All structure is function structuralized in the process of adaptation to environmental situations." The individual is a product of phylogeny and ontogeny. Phylogenesis includes selection and differentiation, and ontogenesis includes gestation, parturition, and socialization. The last stage may be subdivided into the socio-physiological or pre-speech stage and the psychosocial or language habit stage. "But the psychosocial development surpasses, in degree of importance to adult behavior, both the phylogenetic and the early ontogenetic history of the person."—*A. G. Bills* (Chicago).

3413. **Schieffelin, B., & Schwesinger, G. C. Mental tests and heredity.** Cold Spring Harbor, N. Y.: Eugenics Res. Asso., 1930. Pp. 298. $1.50.—The purposes of the book, as stated by the authors, are "to outline the problems involved when mental tests are used for the purposes of eugenics . . . and to survey as completely as possible the non-verbal tests which have been offered at various times for use in appraising general intelligence." The study is divided into four parts: (1) a brief historical survey of the testing movement and of present-day theories of intelligence (18 pages); (2) a general discussion of the heredity-environment issue, with consideration of the various ways in which mental tests have been employed to measure the influence of outer circumstances and of mental inheritance (28 pages); (3) a survey of American non-verbal tests with data regarding their reliability, validity, norms, materials, timing, cost, etc. (181 pages); (4) a general summary of results with tentative recommendations as to steps to be taken for the purpose of fostering the development of objective measures of mental traits (11 pages). Each part has an extensive bibliography. —*B. S. Burks* (Pasadena).

3414. **Smith, G. E. The significance of the Pekin man.** Edinburgh: Oliver & Boyd, 1931. Pp. 20. 6d.—A Henderson Trust Lecture dealing with the recent finds of prehistoric remains near Pekin. The history of the finds is related, and their significance is considered in relation to other similar discoveries. —*F. C. Bartlett* (Cambridge, England).

3415. **Smith, J. C. Psychiatrische Zwillingskasuistik.** (Psychiatric twin cases.) *Acta psychiat. et neur.*, 1931, 6, 79–105.—Detailed case histories and genetic psychiatric diagnosis of some pairs of identical adult twins. Illustrations. Bibliographical foot-notes.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

3416. **Steckel, M. L. Parental age and intelligence of offspring.** *J. Educ. Psychol.*, 1931, 22, 212–

220.—It is found, with large samplings, that "below the age of twenty-six to twenty-eight for mothers and thirty to thirty-two years for fathers, the younger the parents the less favorable is the prognosis for the intelligence of the offspring." The more nearly "the ages of the two parents approach each other the more favorable is the prognosis for the intelligence of their children." Prognosis becomes less favorable as the disparity between parental ages grows extreme. Several possible interpretations are discussed.—*J. A. McGeoch* (Missouri).

3417. **Steggerda, M. A family of mechanics.** *Eug. News*, 1931, 16, 58–59.—In a family of nine brothers, seven are described as exceptionally mechanical.—*R. K. White* (Stanford).

3418. **Thurstone, L. L., & Jenkins, R. L. Order of birth, parent-age, and intelligence.** Chicago: Univ. of Chicago Press, 1931. Pp. xiii + 135. $3.00.—Part I, 56 pages, presents original material. There is a slight positive correlation between birth rank and intelligence, but no relation between parent-age and intelligence. The relationship between intelligence and size of sibship is negative down to about 55 IQ but positive below that. First-born children are disproportionately frequent among the problem cases investigated, as are also children whose next younger or older sibling is of the same sex. Part II is a review of other studies. Bibliography of 167 items.—*R. R. Willoughby* (Clark).

[See also abstract 3474.]

SPECIAL MENTAL CONDITIONS

3419. **Allport, G. W. What is a trait of personality?** *J. Abn. & Soc. Psychol.*, 1931, 25, 368–372.—Traits, although appropriated by all manner of writers for all manner of purposes, may still be salvaged, and limited in their reference to a certain definite conception of a generalized response-unit in which resides the distinctive quality of behavior that reflects personality. Eight criteria are given to define a trait and to state the logic and some of the evidence for the admission of this concept to good standing in psychology.—*C. H. Johnson* (Boston Psychopathic Hospital).

3420. **Bickel, L. Über Beziehungen zwischen der Psychoanalyse und einer dynamischen Psychologie.** (On the relation between psychoanalysis and a dynamic psychology.) *Zentbl. f. Psychotherap.*, 1931, 4, 221–246.—The theories of Spinoza, developed in the philosophy of Constantin Brunner, conceive of the structure and function of the human soul in a way strictly harmonious with the findings of Freud arrived at by him empirically and independently.—*M. A. M. Lee* (Chicago).

3421. **Böhme, —. Ein angeblicher Chemnitzer Hellseher.** (A pretended clairvoyant of Chemnitz.) *Krim. Monatsh.*, 1931, 5, 85–86.—Relates an attempt on the part of the pretended clairvoyant Meyermann of Chemnitz to locate the body of a man who had met with a fatal accident in the mountains. Analysis of the situation clearly shows that the body was quite easily discovered through simple processes of reasoning. Meyermann had known the deceased intimately for years, and was well acquainted with his favorite mountain walks and expeditions. Meyermann possessed no clairvoyant powers whatsoever.—*P. C. Squires* (Clinton, N. Y.).

3422. **Bowman, K. M. Personal problems for men and women.** New York: Greenberg, 1931. Pp. 279. $3.50.—The book represents the contents of the lectures given in one of the Massachusetts University Extension Courses. "I have started out with the discussion of the constitutional factors and the relation of heredity to behavior, as that seemed to me the logical place to begin. Following this I have discussed the physical factors in behavior, how structure determines and limits behavior, how physical disease and physiological changes influence personality and behavior. Next there has been a discussion of the psychological factors. After this there has been a more specific discussion of problems. Since so much maladjustment in adult life reverts back to faulty mental hygiene during childhood, one chapter has been devoted to mental hygiene of childhood, and a second chapter to mental hygiene of adolescence. Following this there has been a discussion of more specific problems." The author has not followed one point of view entirely, but has attempted to present any of the aspects of different theories when they appeared of importance to him, and applicable to the case in hand. There are a good many familiar case studies. The specific problems discussed are: fatigue, sleep, tobacco, alcohol, vocations, recreation, worry and fear, sex, marriage, religion, and moral values.—*D. E. Johannsen* (Rochester).

3423. **Darlington, H. S. Ceremonial behavior respecting houses and house burial.** (Second paper.) *Psychoanal. Rev.*, 1931, 18, 181–200.—Review of primitive ceremonies indicating that coition seems to be symbolic of death (or connected with it), while burial is equated to gestation, and the womb is a grave.—*D. E. Johannsen* (Rochester).

3424. **Ferenczi, S. Interprétation et traitment psychanalytiques de l'impuissance psychosexuelle chez l'homme.** (Psychoanalytical interpretation and treatment of psychosexual impotence in man.) *Rev. fr. de psychanal.*, 1930–31, 4, 230–244.—The author feels that psychosexual impotence is always a manifestation of a psychoneurosis, with the origin common to all the psychoneuroses (Freud), i.e., it is always a symbolic manifestation of repressed memories of sexual experiences of childhood. In cases of sexual impotence these repressed traces are incompatible with the civilized conscience of the individual; the unconscious prohibition is directed toward a particular sexual activity, but the effect extends to sexual pleasures in general. Among the causes of psychosexual impotence are incestuous fixations and shame for infantile sexual play. The solution of the difficulty lies in a psychoanalysis.—*D. E. Johannsen* (Rochester).

3425. **Guilford, J. P., & Braly, K. W. An experimental test of McDougall's theory of extroversion-introversion.** *J. Abn. & Soc. Psychol.*, 1931, 25, 382–389.—There is apparently nothing in common between the rate of fluctuation of the Necker-Wheatstone cube and extroversion-introversion as measured by two of the common rating scales for that trait, although McDougall suggested the use of the Necker-Wheatstone cube as a test for extroversion-introversion. The rate of fluctuation of the Necker-Wheatstone cube is a highly reliable measure of some psychological function, this function being fairly constant during an hour of testing, but differing considerably from day to day. Alcohol had no constant influence on the change in rate of fluctuation, although there seemed to be a slight tendency toward an increase. The effect of strychnine seems to be that of acceleration of the rate of fluctuation.—*C. H. Johnson* (Boston Psychopathic Hospital).

3426. **Hesnard, A. Sur l'apparence non sexuelle de certains souvenirs infantiles pathogènes (à propos de la claustrophobie).** (The non-sexual appearance of certain pathogenic infantile memories, particularly in claustrophobia.) *Rev. fr. de psychanal.*, 1930–31, 4, 259–265.—The author criticizes the interpretation made of the case of claustrophobia reported by Rivers. He shows that a more careful analysis reveals an infantile anxiety based on the patient's relation to his older brother (father-imago), involving homosexual tendencies and a castration complex. Other cases are found to confirm this interpretation, i.e., that there is a sexual basis, even in phobias which appear to be non-sexual in character. —*D. E. Johannsen* (Rochester).

3427. **Huebsch, D. A. Psychoanalysis and eye disturbances.** *Psychoanal. Rev.*, 1931, 18, 166–180. —Case studies indicating the close connection between the functioning of the eyes and the sexual instinct.—*D. E. Johannsen* (Rochester).

3428. **Hull, C. L. Quantitative methods of investigating hypnotic suggestion. Part II.** *J. Abn. & Soc. Psychol.*, 1931, 25, 390–417.—This article completes the publishing of 102 suggested experiments in hypnosis which the author believes will contribute to the knowledge of the hypnotic trance.—*C. H. Johnson* (Boston Psychopathic Hospital).

3429. **Künkel, F. God helps those. . .** New York: Ives Washburn, 1931. Pp. x + 279. $3.00.—The purpose of this book is to formulate the answer of modern psychotherapy to the problems of individual development. The author belongs to the school of individual psychology, founded by Alfred Adler. There is no mention of some of the essential elements of Adler's theories. The chapter titles include: responsibility, striving for the goal, unity, nursery, school, adolescence, insight, confession, affirmation, preparing for the help, resistance, and the nature of healing. Each section of the book is summarized by a definite rule of procedure. There are no references.—*E. M. Ligon* (Union).

3430. **Laforgue, R. De l'angoisse de l'orgasme.** (From anxiety to the orgasm.) *Rev. fr. de psychanal.*, 1930–31, 4, 245–258.—The author is interested in the erotic coloring which anxiety may, in certain cases, take on. On the basis of case studies derived from neurotic patients, he concludes that in many cases there is a sort of "artificial anxiety" which serves the purpose of an erotic satisfaction. There is probably an intimate relationship between this eroticized anxiety and the eroticized feeling of guilt, which would raise the "goal of remorse" to the rank of a despot.—*D. E. Johannsen* (Rochester).

3431. **Laforgue, R. Devant la barrière de la névrose. Étude psychanalytique sur la névrose de Charles Baudelaire.** (Before the barrier of the neurosis. A psychoanalytic study of the neurosis of Charles Baudelaire.) *Rev. fr. de psychanal.*, 1930–31, 4, 274–406.—The publishing house of Gallimard refused this book on the basis that there were "conscientious scruples" against publishing anything which might injure the feelings of the many admirers of Baudelaire, i.e., those who desire to see in him a divinity rather than a man. Baudelaire is chosen as an example of a man suffering from a serious illness, and no attempt is made to evaluate his literary work from any other standpoint; his art is of interest only because it is the expression of his mental conflicts. Using many quotations from his own works and from his biographer, Porché, it is shown that the fundamental basis of Baudelaire's neurosis was a severe Oedipus complex, and a marked resentment and fear of his step-father. He suffered from syphilis from the age of 20, dying of paresis at 45; it is pointed out that even had it been possible to treat this disease by modern methods he would undoubtedly have been reinfected promptly, the disease representing in him, as in many other cases of this type, a kind of self-punishment. His numerous asocial acts are also interpreted as a function of his unconscious need of punishment for his incestuous desires. He was sexually impotent, save after certain acts which were essentially homosexual in nature. (In his diary he notes that the embraces of love are like a torture, a surgical operation.) He was characteristically a *voyeur;* the extent to which other parts of the body can serve an erotic function is discussed in some detail. The article ends with an analysis of the neurosis from a social point of view, and a discussion of the need for reformation in the attitude that society takes toward this type of behavior. The important work that psychoanalysis is doing in this regard is emphasized.—*D. E. Johannsen* (Rochester).

3432. **Lewis, N. D. C. Additional observations on the castration reaction in males.** *Psychoanal. Rev.*, 1931, 18, 146–165.—A presentation and discussion of mentally disordered males showing overt tendencies to castrate themselves, or having castration gestures, e.g., suicide. In every case there is a consciousness of a fundamental difficulty in the sex-life. The self-castration is an attempt to remove the somatic basis of the conflict, and thereby relieve it. It is reported

that in the average case of suicide the immediate sexual issue is a failure to adjust at the heterosexual level; in overt castration response the more immediate issue is the masturbation conflict.—*D. E. Johannsen* (Rochester).

3433. **Loewenstein, R. Remarques sur le tact dans la technique psychanalytique.** (The rôle of tact in psychoanalytic technique.) *Rev. fr. de psychanal.*, 1930–31, 4, 266–275.—The author points out the necessity, especially when the resistance is strong, that the analyst display tact in his interpretations. The author gives the following rule: "The analyst ought always to draw attention to the latent meaning of the interpretation which he gives, and avoid that which bears, even implicitly, a prohibition or reproach of the right of the analysand to certain feelings or thoughts."—*D. E. Johannsen* (Rochester).

3434. **Mayer, F. Freud und Adler im Licht der Ästhetik.** (Freud and Adler in the light of esthetics.) *Zentbl. f. Psychotherap.*, 1931, 4, 219–221.—Freud's psychoanalysis is analogous to the modern novel in which the origin of the special symptom complex is historically developed. Adler's presentation, on the other hand, resembles the fable in which the same ageless forces reappear in different guises to point the same moral. Adler's method is suited to adjusting the individual to his cultural setting, obtaining good results in superficial neuroses in children; while Freud's deeper psychology gives him preeminence in the difficult field of anxiety and compulsion neuroses and perversions.—*M. A. M. Lee* (Chicago).

3435. **Odier, C. L'argent et les nevrosés. II.** (Money and the neuroses. II.) *Rev. fr. de psychanal.*, 1929, 3, 690–734.—In the first part of this article the author presented largely clinical discussions of cases illustrating in detail, from the psychoanalytic point of view, the "symptoms, fantasies, and acts of a patient which bore upon money," bringing out the unconscious symbolism of money in the life of the ego. This symbolism is essentially sexual, disguising repressed erotic and perverse desires but also permitting their sublimation. The present, second, part of the article discusses in detail, again upon the basis of case histories, and especially of dream analyses, the question of the ambivalent attitude toward money and the matter of the compromises and over-compensations by which the patient attempts to adjust his tendency to possess to the pressure of society and of his own super-ego urging him to give as well as take. The patient's behavior in financial situations is regarded by the author as symbolic of his fundamental emotional relations to his own personality and the personalities around him.—*E. M. Pilpel* (New York City).

3436. **Oppenheim, J. American types.** New York: Knopf, 1931. Pp. 210. $2.50.—The author states that this book is an American interpretation of the psychology of Jung. It describes American types. The psychologies of Freud and Adler are briefly described. In addition to Jung's type psychology, his concept of the collective unconscious is described in some detail. With reference to American types, the author has found seven extroverted male types, four extroverted female types, six clear introverted male types, and two types of introverted women. Types may also be differentiated physically, making possible a physiognomy of types. The implications and value of analytic psychology are discussed. There is no bibliography.—*E. M. Ligon* (Union).

3437. **Rademacher, G. C. Some environmental factors contributing to problems of adjustment.** *Psychiat. Quar.*, 1931, 5, 287–292.—The author stresses the fact that behavior is not a simple result of two easily-defined factors, but rather an algebraic equation including in its solution a series of unknown, uncertain and ill-defined quantities. Heredity, physical fitness, the intellectual level of the individual and his emotional life must all be given serious consideration. But there is little point in expecting a successful outcome of the treatment if the patient is to be continued in the same social setting which harbored and fostered his unadjusted patterns, unless this has likewise been treated at least to the extent that it has become a pleasanter and healthier soil. Most of the responsibility for the manipulation of the environment should rest upon the psychiatric social worker.—*E. T. Burr* (Vocational Adjustment Bureau).

3438. **Smith, S. Alcohol and behavior.** Edinburgh: Oliver & Boyd, 1930. Pp. 37. 6d.—A Henderson Trust Lecture. An experimental and social study of the effects of alcohol. Some original data are included.—*F. C. Bartlett* (Cambridge, England).

3439. **Von Hartmann, E. Philosophy of the unconscious.** (Trans. by C. K. Ogden.) London: Kegan Paul, 1930. Pp. xxxviii + 368. 15/.—This is a new translation of Von Hartmann's well-known treatise, the original English translation having been out of print for some years. A short historical and critical preface is added.—*F. C. Bartlett* (Cambridge, England).

3440. **Wells, W. R. Hypnotizability versus suggestibility.** *J. Abn. & Soc. Psychol.*, 1931, 25, 436–449.—The results of the test and questionnaire studies reported point towards the separateness rather than the identity or even similarity of hypnotizability and everyday suggestibility. The more hypnotizable are not the more uncritical, gullible, and submissive in everyday life, but, on the other hand, slightly the reverse. The conclusions are intended to be only tentative, as they are based on limited data.—*C. H. Johnson* (Boston Psychopathic Hospital).

3441. **Westburgh, E. M. A point of view—studies in leadership.** *J. Abn. & Soc. Psychol.*, 1931, 25, 418–423.—In the approach to "personality" individual men and women should be studied as organisms who function as units, and described and evaluated as such. Leadership can be understood and predicted through the understanding and evaluation of the

abilities and characteristics of individual men and women, considering the interreactions of the abilities and characteristics as a unit, functioning under specific conditions.—*C. H. Johnson* (Boston Psychopathic Hospital).

3442. **Wexberg, E. The psychology of sex; an introduction.** New York: Farrar & Rinehart, 1931. Pp. 241. $2.50.—The author's central purpose is the clarification of the usual sexual topics which present many problems of adjustment for the layman. Chapters on sexuality, reproduction, love, sex and character, conflict and perversion, and sex education are discussed in some detail from the Adlerian point of view. The fundamental goal of sex education is to teach the child that correct sexual behavior is that which furthers the commonweal.—*J. W. H. Ross* (Clark).

[See also abstracts 3370, 3448, 3451, 3464, 3497, 3518, 3523, 3564.]

NERVOUS AND MENTAL DISORDERS

3443. **Bisgrove, S. W. Clinic problems.** *Psychiat. Quar.*, 1931, 5, 300–306.—The author stresses the fact that the interest of the public is now more centered in the quality of life than in longevity. The state hospital is taking legitimate leadership in the mental hygiene movement and the work of psychiatric clinics is accomplishing much in persuading both the layman and the medical practitioner to take a more intelligent attitude toward public health problems. The success of a mental clinic depends chiefly upon the number of positive contacts which can be established by the clinic physician in the community. Results are demanded of him, and his services to the community must be in the form of definite recommendations as to the handling of each patient referred to him.—*E. T. Burr* (Vocational Adjustment Bureau).

3444. **Bond, E. A., & Appel, K. E. The treatment of behavior disorders following encephalitis: an experiment in re-education.** New York: Commonwealth Fund, 1931. Pp. 163. $1.75.—A report of a study and treatment experiment of forty-eight children showing post-encephalitic behavior disorders. Composite histories of various types of children are given. The organization of the hospital school (at the Department for Nervous and Mental Diseases of the Pennsylvania Hospital), the problems met, and the methods adopted are discussed in some detail. An analysis of the effects of treatment is made and a comparison of results with those of other experiments is set forth. The authors make some suggestions for the wider application of their methods in other communities.—*D. Shakow* (Worcester State Hospital).

3445. **Ewing, A. W. G. Aphasia in children.** Oxford: Oxford Univ. Press, 1930. Pp. xi + 152.—A number of children never learn to speak or to understand speech, and some of these are thought to be deaf mutes whose sole defect is that they are selectively deaf to sounds of high frequency. In this book Ewing describes tests for the discrimination and subsequent elimination of these special difficulties. He also examines a few cases of acquired aphasia, but finds them to be of a fundamentally different type. A. D. Adrian writes a preface to the book.—*F. C. Bartlett* (Cambridge, England).

3446. **Freeman, W. Reversion to primitive behavior resulting from organic disease of the brain.** *Human Biol.*, 1929, 1, 406–420.—(*Biol. Abst.* V: 11150).

3447. **Fuller, R. G., & Johnston, M. The duration of hospital life for mental patients.** *Psychiat. Quar.*, 1931, 5, 341–352.—Preliminary paper—a study of the occurrence and social significance of mental diseases in New York state. The report covers an examination of more than 37,000 first admissions to the civil state hospitals of New York. One of the interesting findings of this inquiry is the fact that the majority of mental patients are in hospital either a very short time, all told, or a very long time. Almost one-half of all first admissions did not remain in hospital as long as one year before they were discharged as "recovered," "much improved" or "improved." Several tables illustrate the findings.—*E. T. Burr* (Vocational Adjustment Bureau).

3448. **Fürst, R. Zur Frage der Psychotherapie Sozialversicherter.** (On the question of psychotherapy for the socially insured.) *Zentbl. f. Psychotherap.*, 1931, 4, 216–219.—The socially-insured today is given the best medical care, but psychotherapy for him is limited by the rule that not more than 15–20 sessions may be held. This is incompatible with the ruling that the physician should be free to use the method of choice in each case. For although many patients can be cured by this "little psychotherapy" other cases, especially compulsion, anxiety and genital neuroses, require complete psychoanalysis, the duration of which cannot be predicted. This could be provided for a selected few without greatly increasing the financial burden if a physician does analyses on half time, seeing 5 cases a day. The present situation should be corrected, since it is unfair to the insured to fail to give him the best care available if he has a neurosis.—*M. A. M. Lee* (Chicago).

3449. **Grover, M. M. Report of a case of *folie à deux*.** *Psychiat. Quar.*, 1931, 5, 307–311.—The literature would lead one to believe that in *folie à deux* cases a similarity in the manifestations of the disorder, or the acceptance by one of the ideas held by the other, always exists. Three forms of this mental disorder are described and the case of two sisters who presented an identical psychosis is given in some detail. The interests of these two women were confined almost entirely to each other. The author is led to believe, however, that the groundwork for the psychosis was independent of their association and that both were potentially psychotic, although the ideas of the dominant older sister were accepted by the younger.—*E. T. Burr* (Vocational Adjustment Bureau).

3450. **Hinsie, L. E. Successful socialization and compensation in manic depressive psychosis.** *Psychiat. Quar.*, 1931, 5, 312–340.—The trend of modern psychiatry continues on the whole in the direction of those groups of mental disorders that have proved themselves to be amenable to investigation and therapy from the standpoint of psychobiology. The psychoses are being looked upon as one of the links in a long series of personality reactions. In this article, the author's definite purpose is to stress the meaning of data that are not directly presented in the more or less circumscribed psychotic picture. He states that it is no longer tenable to speak of insight only in Kraepelin's sense. It has been observed that a series of closely identified relationships of psychical factors extending from consciousness deep down into the unconscious field may often be understood by patients. Insight of this nature is decidedly apart from the insight that enables the patient to appreciate his mental phenomena only in terms of "morbid" or "normal." The first sign of success in the psychotherapy of any of the biogenetic psychoses is the development of the *wish* on the part of the patient to understand the causes of the mental disorder. Sometimes the psychiatrist has to work patiently to develop the wish. When socialization and compensation are under consideration, one must inevitably take into account the several personalities incorporated within the patient. Case studies are given to illustrate various aspects in the technique of treatment.—*E. T. Burr* (Vocational Adjustment Bureau).

3451. **Jolowicz, E., & Heyer, G. Suggestion therapy and hypnosis and hypnotherapy.** (Trans. by A. Eiloart.) London: Daniel, 1931. Pp. 237. 8/6.—Jolowicz deals with suggestion therapy. He gives an account of modern methods, both indirect and direct, of the use of suggestion in psychotherapy, mainly confining himself to a consideration of methods in use on the continent of Europe, and being largely concerned with immediate post-war work. There is some theory. Heyer gives detailed instruction in the use of certain methods of inducing hypnosis, and considers, with illustrations, their uses and limitations. Some attempt is made to answer the question of what the mechanism of hypnosis actually is. The book is addressed to the medical practitioner and to the educated layman. Short bibliographies are included.—*F. C. Bartlett* (Cambridge, England).

3452. **Langdon-Down, M., & Brain, W. R. Time of day in relation to convulsions in epilepsy.** *Lancet*, 1929, 1, 1029–1032.—(*Biol. Abst.* V: 11174).

3453. **Lange, W. Genitalentwicklung und Körpergrösse bei Schwachsinnigen.** (Genital development and body size in the feeble-minded.) *Endokrinologie*, 1928, 1, 174–180.—(*Biol. Abst.* V: 10994).

3454. **Lhermitte, M. J., & Levy, G. L'hallucinose pédonculaire (un nouveau cas de lésion de la calotte pédonculaire provoquée par une intoxication aiguë par divers narcotiques).** (Peduncular hallucinosis (a new case of lesion of the peduncular covering provoked by intoxication augmented by various narcoties).) *Rev. neur.*, 1931, 38, 312–318.—It seems to have been proved that there exists at the base of the brain an apparatus, or a regulator of waking and sleeping, the disorder of which conditions the appearance either of insomnia or pathological sleep. One of the authors has already shown that a mechanical lesion striking the peduncular covering could produce conscious hallucinatory disorders in a subject in full mental health. In this new research the peduncular lesion appears in connection with a lesional organic perturbation caused by pharmacotoxic action (sulfonal, chloral, and gardenal), and as in the preceding experiment, the hallucinosis is typified by the appearance of visual images sometimes associated with false tactile perceptions, these visions being colored, mobile and silent. These hallucinations appear some days after the establishment of the nervous lesion and regress and disappear along with the recuperation of the functions which have been removed or upset. The authors admit that this appearance of images must be considered as a dream in the state of sleep. This observation explains how certain narcotics introduced into the organism in toxic doses can be the origin at the same time of the reduction of the narcosis and the liberation of the active component of the hypnotic function, the dream.—*Math. H. Piéron* (Sorbonne).

3455. **Lundholm, H. The manic-depressive psychosis.** *Duke Univ. Psychol. Monog.*, 1931, No. 1. Pp. 86.—A theory of manic-depressive psychosis is set forth to which McDougall contributes an introduction. The essential feature of the theory is that the disease has a toxic basis which is assumed to be a depressant drug. The effect of the drug is to disturb the cortical integration which is the concomitant of the integration of the mind known as personality. The author discusses the process of adaptive integration of the mind into personality, emphasizing in particular the two processes involved—sublimation and suppression. The disintegration of the personality in the psychosis shows itself in three "imperial moods," the feeling of omnipotency, the feeling of inadequacy, and the feeling of unreality. The first two have also to be accounted for by a constitutional trait of the individual, the cycloid trait. A diagrammatic summary of the principles and symptoms is given.—*D. Shakow* (Worcester State Hospital).

3456. **Nathan, M. L'esprit et ses maladies.** (The mind and its maladies.) Paris: Rieder, 1931. Pp. 210. Fr. 20.—The author groups under the name of human mind the whole of the psychic personality, intellectual or affective. The harmony of this psychic synthesis necessitates the integrity of the prefrontal lobe, that is to say of the frontal lobe minus its ascendant gyrus, the rôle of which is motor. In the first part of the book the author studies successively the connection between the prefrontal lobe and the sensory functions, cenesthesia, voluntary motility and auto-conduction. A chapter on pure psychology treats of the social ego, the animus, and the funda-

mental ego, the anima. In the second and third chapters the author passes in review first the psychoses called organic, and then those called non-organic. Short bibliography.—*Math. H. Piéron* (Sorbonne).

3457. **Nitsche, P. Zur psychotherapeutischen Würdigung der Beschäftigung Geisteskranken.** (The psychotherapeutic value of occupation for psychotics.) *Zsch. f. psych. Hygiene,* 1931, 4, 39–50.—The surprising changes in the condition of his patients have caused Nitsche to look more closely into the psychological mechanism of "work-therapy." He says that the trouble with the psychiatrist is that he must of necessity start out with the experiences of his own normal mind, and try to reach the patient from that direction. This, in the opinion of the author, is a grave error. The work given his charges must be purposive, must strive for a goal, must give the "whole man" satisfaction. The problem of the psychiatrist is to gain the cooperation of his patient, find congenial occupation and proper means to this end. This systematic coordination of mind and body to a set goal is the best way to lead the afflicted mind into normal channels. Naturally the moments of affective quiescence through work and the lessening of conflicts are apparent especially in manic disturbances and schizophrenic restlessness. Not only must a patient be given a goal to reach with systematic movements, but he must also be given a chance to work off his surplus energy in coarse motor activities, designed for special needs of each individual. The author says much can be done in this regard with games, furnishing means for stimulating flagging interests and making quick adjustments to unforeseen situations. Beside deflecting surplus energy the coordination necessary to take part in games is a most valuable factor in psychotherapy. If this can be done so as to give the sufferer a certain responsibility the salutary effect is enhanced, because he is made more self-reliant. The games also give the director a chance to approach the "negativists." Nitsche says that where regulated work fails more motor activity should be given to loosen the tension, but where this also proves futile, hydropathy often registers. He agrees with Simon that in the worst cases of depression motor activity is indicated. In the worst cases of paralytic and epileptic disorders, he still insists that purposive movements should be considered. Nitsche says with Kehrer that psychotherapy is an art scientifically based.—*M. F. Mehling* (Cleveland, Ohio).

3458. **Nyirő, G. Az endogén és exogén hallucinációk.** (Endogenous and exogenous hallucinations.) *Magyar psychologiai Szemle,* 1930, 3, 3–18.—Endogenous hallucinations are those which are quite a part of the patient's mental organization, but in which there is no sensible connection between the motor response and content of the hallucination. They never astonish the patient; they may or may not be clear; their duration is variable; usually the patient can call them forth or interrupt them at will. In fact, the only element in the hallucinations of this type which permits us to classify them in the same group is the fact that they always arise as a secondary symptom and develop as a result of a functional psychosis or a psychopathic personality. In toxic psychoses or in cases of injuries to the head, another type of hallucination, the exogenous, arises. They are always projected by the patient into objective space, and have a sensory character. They are very clear and lively, are independent of the patient's will, their content surprises the patient, and they usually occur only in connection with a clouding of consciousness.—*D. E. Johannsen* (Rochester).

3459. **Phillips, A. The clinical examination and diagnostic teaching of cases at the psychological clinic of the University of Pennsylvania.** *Psychol. Clin.,* 1930, 19, 169–200.—Part I. *Classification of Clinic Cases in the Summer Session of 1930.* 65 cases are included. They are classified into the following groups: (1) Superior. 19 cases with an IQ range from 117–170. (2) Modal group. 19 cases with IQ's ranging from 91 to 113. (3) Inferior. This group is divided into three sub-groups: (a) Cases with normal mentality but intellectually deficient. 16 cases with IQ's from 70.5 to 90. (b) Borderline. 5 cases with IQ's from 57 to 80. (c) Feeble-minded. In two of the 6 cases no IQ was obtainable. The others ranged from 32 to 66. The classification was based upon the social fitness of the cases. Case studies are given of typical examples under each heading. Part II. *Six Cases of Dyslexia.* This report is based upon the study of 25 cases, six of which are reported in detail. In only one of the 25 cases could reading difficulty be said to be due to a single cause. This cause was a deficit in the visual memory for words. In all the other cases there was a combination of several causes. The author classifies the various factors involved as follows: (1) Primary causes. (a) Sensory defects. (b) Deficit in imagination and memory due to central causes. (c) Limited capacity for associability. (d) Defects of attention. (2) Contributing cause. (a) Inadequate motivation. (3) Secondary factors. (a) Inadequate instruction. (b) Faulty reading habits. (c) Acquired aversion to reading induced by the sense of constant failure. The IQ's of the six cases reported range from 90 to 138, and the author remarks that reading problems are found throughout the entire range of distribution of IQ's. The cases reported illustrate how the various factors enumerated above combine to cause reading problems. The method of treatment prescribed is indicated in the report of each case.—*J. T. Metcalf* (Vermont).

3460. **Portmann, G., Despons, J., & Retrouvey, H. Les séquelles vestibulaires de l'encéphalite épidémique.** (The vestibular sequels of epidemic encephalitis.) *Acta Oto-Laryngol.,* 1931, 15, 433–439.—Vertigo, though the most rare equilibratory difficulty, is the most frequent vestibular symptom following epidemic encephalitis. Motor ocular disturbances are most constant but of many kinds. Because of diverse muscular involvement, the only

satisfactory examinations are those for nystagmus. They show a hypoexcitability of the vestibular apparatus more marked with caloric than with rotary examinations. The hypoexcitability is more marked in the horizontal than in the vertical canals. Contrary to previous investigations, there is a conservation of normal deviation movements.—*M. B. Mitchell* (Yale).

3461. **Sommer, R. Die Bedeutung von Erholung und Nebenbeschäftigung in der psychischen Hygiene.** (The significance of recreation and a hobby in mental hygiene.) *Zsch. f. psych. Hygiene*, 1931, 4, 34–39.—Sommer says that just as errors are committed in trying to regain physical strength, so greater mistakes are made in regaining and safeguarding the mental health of the individual. He advocates the organizing of recreation to meet the needs of each, and the riding of a hobby as fundamental to keeping mentally fit. As a second point he urges the proper exercise of all muscles, warning against the overworking of particular sets of muscles. Exercises must be of a cortico-muscular character. Sommer says that with most of us the motor spheres of the cerebrum are neglected, making us automatons. All areas of the brain as well as the body should get "balanced rations." The author insists that well regulated and spirited pursuit of a side line of activity, such as music, art, literature, protects people from premature old age and mental torpidity. Last, the author stresses daily rest periods, spent in enjoying a fine picture or other work of art, or listening to good music. For the professional man or tired factory worker this is time well spent. The radio can be of inestimable value in this way, as well as of great harm. The erection of public rest halls is the author's hobby.—*M. F. Mehling* (Cleveland, Ohio).

3462. **[Various.] Problems of mental deficiency.** *Ment. Hygiene Bull.*, 1931, 9, No. 3, 1; 4; 7.—What can be done to convert large numbers of the feebleminded and the intellectually subnormal from social liabilities into social assets is shown in the report, reprinted here, of the committee of the White House Conference on Child Health and Protection dealing with the mentally handicapped. Community responsibility is emphasized. The suggested program includes three parts. The first is identification and registration of such persons in the community. The second is training in self-direction for those capable of such training and segregation of the others. And finally supervision for those kept in or returned to the community.—*E. M. Ligon* (Union).

3463. **Wuth, O. Ueber psychische Krankheitserscheinungen bei Hypoglycaemie.** (Psychic symptoms in hypoglycemia.) *Monatssch. f. Psychiat. u. Neur.*, 1929, 73, 129–137.—(*Biol. Abst.* V: 11210).

[See also abstracts 3370, 3389, 3415, 3490.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

3464. **Alexander, F. Buddhistic training as an artificial catatonia.** *Psychoanal. Rev.*, 1931, 18, 129–145.—The ascetic training of the Buddhistic monks is a systematic suppression of all emotional life. Analytically this means a closing of all the erotic outlets of every kind, and a leading of the libido to the ego entirely. The author describes the 4 steps of Jhana leading to Nirvana: again from the analytical standpoint these steps represent a sadistic, self-induced melancholia, then narcissism, then a diminution of the feelings of pleasure (which are gradually replaced by apathy), and finally a stage of complete mental emptiness and uniformity. This last stage is qualitatively the same as Nirvana, which merely intensifies the absorption. Nirvana is the condition in the mother's womb; psychologically it is a regression to intra-uterine life—"no perception, no wishes, the peace in which there is no death nor being reborn, no Here, no Beyond, only an intermediate kingdom, that is even the end of sorrow." Buddha's method is close to psychoanalysis, since both strive to understand the unconscious, but with the fundamental difference that Buddhism denies reality, while psychoanalysis tries to adjust to it. Because Buddha, however, did not completely break away from reality, leaving an unresolved object transference in his followers, he is forced to go. "He denied the world, and the denied world revenged itself upon him in the form of the unconscious parricidal wishes of his followers."—*D. E. Johannsen* (Rochester).

3465. **Archer, G. L. Laws that safeguard society.** Boston: Suffolk Law School Press, 1931. Pp. 382.—This book states the attitude of one who opposes the modern psychiatric approach to penology, and who believes that fear of punishment is the most effective deterrent to wrong doing, even in young children. The book explains criminal law in simple non-technical language. The cases chosen to illustrate how the law works frequently show how badly it works, as in the case of men in North Carolina who shot across the state line and killed a man in Tennessee, but were set free by the North Carolina court because no murder was committed within its jurisdiction. The author stoutly defends the traditional system. The book explains to psychologists and psychiatrists without legal training the views of lawyers and judges without psychological training.—*M. F. Martin* (West Springfield, Mass.).

3466. **Barth, —. Kastration und Geschlechtsleben.** (Castration and the sexual life.) *Krim. Monatsh.*, 1931, 5, 57–59.—Describes the case of a married man who was castrated, and the domestic complications following upon this castration. The case is significant for criminology in view of the fact that it has been asserted that castration would infallibly be a cure-all for sexual offenses. The writer demonstrates that such assertion is without scientific foundation. For one thing, the time of life at which the operation is performed has much to do with the whole matter; for another, it is very difficult to obtain truthful statements of facts from all parties concerned.—*P. C. Squires* (Clinton, N. Y.).

3467. **Bastide, R. Les problèmes de la vie mystique.** (Problems of the mystic life.) Paris: Colin, 1931. Pp. 216. Fr. 10.50.—The author envisages classic mysticism as the fruit of a long tradition. He tries at first to discover the stages of this tradition and to describe mystic experience (the elementary forms of the mystic life, the mystic chain, the mystic technique, mystic states and beauties, mystic difficulties, the theopathic state). In the second part, he shows that there have been two great movements in the history of mystic experience, one which tended toward the exaltation of life toward the joy of an ego liberated of the ordinary bounds of social existence; the other a movement of suicide, the taste for despoliation, for nothingness. Mysticism is a method of life and a method of knowledge, and at the same time an effort to seize in exalted intuition the beyond.—*Math H. Piéron* (Sorbonne).

3468. **Bondy, —. Zur unbestimmten Verurteilung bei Minderjährigen.** (The indeterminate sentence in the case of minors.) *Monatssch. f. Krim.-psychol. u. Strafrechtsref.*, 1931, 3, 135–140.—The author considers the evidence for and against the effectiveness of the indeterminate sentence and concludes that this type of sentence for minors is superior to the determinate sentence. He confirms his position by means of pedagogical arguments; these arguments must have the unconditional predominance when considering the punishment of minors. "Experience with the indeterminate sentence for minors must also throw light of the applicability of this type of sentence to the adult offender."—*W. Beck* (Leipzig).

3469. **Brasol, B. L. The elements of crime; psycho-social interpretation.** (2d ed.) New York: Oxford, 1931. Pp. 450. $5.00.—(See II: 1924 for 1st ed.)—(Not seen).

3470. **Brockett, E. G. Cooperative relationships between clinics and social agencies.** *Psychiat. Quar.*, 1931, 5, 293–299.—Cooperative case work is case work in which the professional activities of the clinic social worker are substituted for those of an outside agency on whose clients the clinic is carrying on work. Cooperative treatment based on an individualized policy for each agency seems to depend more on personal contacts between staff members than on routine written reports. The sending out of form blanks to be filled and returned keeps file clerks busy but is not productive of the best results in the community.—*E. T. Burr* (Vocational Adjustment Bureau).

3471. **Groves, E. R. The family.** *Amer. J. Sociol.*, 1931, 36, 993–1001.—Outwardly it has been an uneventful year in the history of the American family, with the exception of the White House Conference and the establishment of the first matrimonial clinic. There is evidence of an increasing control in parental and sex education and of a greater protest against contemporary mores and law, especially with regard to divorce and the use of contraceptives. The efforts of the Roman Catholic church to conserve family life were given impetus by the encyclical of Pope Pius XI issued at the close of the year. The major problem has been family relief on account of industrial depression and unemployment.—(Courtesy *Amer. J. Sociol.*).

3472. **Kellogg, W. N., & Eagleson, B. M. The growth of social perception in different racial groups.** *J. Educ. Psychol.*, 1931, 22, 367–375.—Following the procedure of G. S. Gates for measuring the growth of social perception, six pictures of the Ruckmick series were presented to 332 negroes, varying in age from 3 to 14. The growth of social perception in negro children is found "to be the same in all major respects as that which Gates found for white subjects." Negro girls are superior to negro boys except at the earlier ages; there is a rough positive relation between social perception and rated intelligence; and the results are not a function of social status.—*J. A. McGeoch* (Missouri).

3473. **Landis, B. Y. Organized religion.** *Amer. J. Sociol.*, 1931, 36, 1030–1038.—This review is limited to an interpretation of events in 1930 within Catholic, Jewish, and Protestant groups, in relation to longer-time developments. Urbanism and secularism affect practically all religious institutions. The disaffection of intellectuals is evident. Still, large sections of the population continue to make use of the conventional programs of religious institutions. A steady interest in international peace is evident in all groups, as is concern over birth control. New knowledge of churches in industrial villages reveals indifference on the part of most of the population to religious ministration, and confusion on the part of the religious leadership. Minorities are concerned with improving inter-faith relations, and with social reconstruction.—(Courtesy *Amer. J. Sociol.*).

3474. **Lange, J. Crime as destiny.** London: Allen & Unwin, 1931. Pp. 199. 6/.—For abstract see V: 1939.—*F. C. Bartlett* (Cambridge, England).

3475. **Lanz, H. The physical basis of rime.** Stanford University: Stanford Univ. Press, 1931. Pp. 365. $6.75.—Physical analysis has shown that vowels are musical chords, and that in each vowel one or two characteristic frequencies are dominant. When English vowels are arranged according to their characteristic frequencies they form two runs, each within the limits of an octave, which fit almost precisely into the chromatic scale. Sequences of vowels therefore constitute melodies. Rime and assonance represent the musical tendency to return to the keynote. The function of consonants in verse is chiefly rhythmical; they act as time-beaters. "Alliteration acts like a powerful drum in the melody of verse." Imperfect rimes function as discords. It appears that the development of rime stands in a definite historical relation to the development of music, and particularly of harmony. Rime, owing to its strong musical appeal, can be utilized to attract attention to rhythmically important places, and particularly to maintain a measured, metrical effect in spite of metrical variability within the verse-line.

Rime and rhythm produce emotional responses peculiar to themselves; they cannot properly be said to "express" antecedent emotions or thoughts of the poet. An oscillograph technique for the study of rhythm is described, with specimen records. Bibliography of 132 titles.—*E. A. Esper* (Washington).

3476. **Maljutin, E. N. Stroboscopische Erscheinungen bei Gesangschülern.** (Stroboscopic phenomena in vocal students.) *Acta Oto-Laryngol.*, 1931, 15, 109–117.—This report is from observations made on 200 vocal students in the Conservatory of Moscow. Large individual differences were found in the structure of their vocal cords, especially in respect to their edges; some were sharp and some very much rounded. Just so great differences were found in their functioning; some were more elastic than others and half of them vibrated irregularly. The right vocal cord vibrated more than the left except in a few subjects, all of whom proved to be left-handed. The voice quality depended upon the isochronous vibration of the cords as well as the factors usually recognized. The stroboscope, which permits an analysis of vocal cord movements, is of great value in teaching voice.—*M. B. Mitchell* (Yale).

3477. **Markowitz, S. H. Gentile-Jewish relationships in a small city in the middle west.** *Rel. Educ.*, 1931, 26, 323–327.—In various ways Jews are made to feel that they are not entirely acceptable to the Gentile citizenry. They react to this treatment by segregation, special education in race traditions, and prohibition of intermarriage. The desire, however, to participate in Gentile activities tends to break down these barriers and when intermarriage occurs racial distinctions rapidly disappear.—*J. P. Hylan* (Stoneham, Mass.).

3478. **Mommsen, T. Das Kriminalrätsel einer pseudonymen Schenkung.** (The criminalistic puzzle of a pseudonymous gift.) *Krim. Monatsh.*, 1931, 5, 53–56.—The strange case of Gertrude Z, investigated by the police of Stettin. This woman, once a member of a religious order, had passed through a nervous breakdown and had resigned from the order. Having afterward acquired title to a large amount of money, she sent this money in a trunk to a Catholic hospital under a pseudonym. Since there was considerable suspicion of crime attached to this gift from an unknown, the authorities made extended and minute investigation into the matter. The results of this investigation revealed a very complicated chain of events. This case, although it had a "happy end," contains information of considerable interest for the criminologist, since it involved *prima facie* the essential elements of a crime. As thorough examination of the facts showed, however, Gertrude Z possessed good and legal title in the money and was not guilty of any crime. The case illustrates strikingly the many dangers involved in the drawing of inferences in solving criminological problems.—*P. C. Squires* (Clinton, N. Y.).

3479. **Mundhenke, K. Versuch einer sozialpsychologischen Analyse des Oberbadischen Aufstandes im September 1923.** (Attempt at a sociopsychological analysis of the uprising in Upper Baden in September, 1923.) Heidelberg: Gebhard, 1930. Pp. 99. —*R. R. Willoughby* (Clark).

3480. **Nelken, —. Brandstiftung und Zeugenaussagen.** (Arson and the testimony of witnesses.) *Krim. Monatsh.*, 1931, 5, 65–66.—In the case of the burning of a paper factory, the testimony of three eye-witnesses to the conflagration seemed to indicate that arson had been committed. Further analysis of the testimony, however, showed that when the fact of the relative positions of the three observers was carefully considered, together with certain phenomena of optical illusion based on reflection, the presumption in regard to the crime of arson disappeared.—*P. C. Squires* (Clinton, N. Y.).

3481. **Paulhan, F. Le sens du rire.** (The meaning of laughter.) *Rev. phil.*, 1931, 56, 5–47.—Laughter, says the author, is a squandering of energy, but from that squandering man has drawn individual pleasure, a language, means of reciprocal influence, means of heightening sympathy, and of regularizing social contacts. Discussing the psychology of laughter, he envisages in turn normal laughter and its conditions, the different forms of laughter and of smiling, laughs of agreement and laughs of opposition, and the comic laugh. He then passes to purely mental laughter, without the squandering of energy. In a second part he brings up the question of the spiritualization and socialization of laughter. He studies the laugh as language, as an individual fact and as a social fact, laughter as an end in itself, then voluntary laughter and simulation, and finally the complexities of the social laugh.—*Math. H. Piéron* (Sorbonne).

3482. **Plaut, P. Beiträge zur forensischen Psychologie.** (Contributions to forensic psychology.) *Zsch. f. angew. Psychol.*, 1931, 38, 510–523.—This is a *Sammelbericht* dealing with a number of legal questions from the psychologist's standpoint. A confession is not basis for condemnation unless confirming evidence is also available, since false confessions are occasionally made to shield others, to avoid publicity, etc. Psychoanalysis has been of value in showing that the real motives of crimes are frequently unknown to the criminal himself and it is therefore absurd to press him on that point. The use of psychologists as experts in court trials should be limited to those who are authorities in the field involved, such as child psychology, sexual pathology, creditability of testimony, etc. Instructive cases illustrative of each point are presented.—*G. W. Hartmann* (Berlin).

3483. **Redfield, B. G. Gods; a dictionary of the deities of all lands.** New York: Putnam, 1931. Pp. 347. $2.00.—A comprehensive handbook of the deities of all lands, including supernatural beings, mythical heroes and kings, sacred books of principal religions, etc. In the back of the book the material is classified under African, American (North), American (South), Assyrian, Egyptian, Greek, Hindu, Mongolian, Phoenician, Polynesian, Roman, Slavonic, and Teutonic.—*J. C. Spence* (Clark).

3484. **Reinhardt, K. F. Fundamental notions of mysticism.** *New Scholas.*, 1931, 5, 103–122.—Mysticism claims the possibility of mystical union with the Deity. The psychology of religion should be able to verify this claim and if found true to prescribe the conditions under which it is possible. Visions, ecstasies, and raptures, while frequently found described in the literature of mysticism, are not essential and do not form its highest features. These are rather a harmonizing of the faculties, an increased vitality, closer relations to God, and a higher fitness for life and social relations. Genuine mysticism is possible only through the cultivation of the Christian life when based on dogmatic and moral theology.—*J. P. Hylan* (Stoneham, Mass.).

3485. **Reuter, E. B., & Runner, J. R. The family.** New York: McGraw-Hill, 1931. Pp. x + 615. $4.00.—116 selections on the topic indicated, organized into 18 chapters. Each chapter is provided with additional reading suggestions, and there is a list of general supplementary readings.—*R. R. Willoughby* (Clark).

3486. **Rugg, H. Self-cultivation and the creative act: issues and criteria.** *J. Educ. Psychol.*, 1931, 22, 241–254.—This is Chapter 19 of Rugg's forthcoming book *Culture and Education in America*. "Two conclusions of crucial importance are possible as a result of this discussion: first, representative art and creative art are two different things; second, both are necessary in our schools. Representative art will supply a crucially needed means of artistic expression in building a clear understanding of our changing society. Creative art is indispensable to the complete development of the cultured man."—*J. A. McGeoch* (Missouri).

3487. **Selbie, W. B. Religion and life.** Oxford: Oxford Univ. Press, 1930. Pp. v + 135. 6/.—Six lectures delivered at Harvard University under the William Belden Noble Foundation. The subjects dealt with are: religion and history; the psychological interpretation of religion; belief in God; religion and ethics; the Christian contribution; eternal life. Selbie's point of view is that of the open-minded though convinced Christian, honestly seeking to discover the truth about the various contributions made in different ways to religious belief and experience. He is inclined to set a high value upon the work of psychology in relation to his main problems, and finds that the psychologists, in their studies of religious expression, have helped to throw much light upon the depth and significance of many varieties of human experience.—*F. C. Bartlett* (Cambridge, England).

3488. **Shaw, C. R., & Moore, M. E. The natural history of a delinquent career.** Chicago: Univ. Chicago Press, 1931. Pp. xv + 280. $3.00.—The bulk of the volume is the life story of a boy, now in the sixth year of a twenty-year sentence, who was convicted of rape at the age of seventeen. Prefixed to the history are chapters on the public reaction to the crime, the delinquency area in which the boy grew up, his companions in delinquency, and his family background. There are also chapters in summary and interpretation, discussions by E. W. Burgess and Mary M. Bartelme (juvenile court judge), and appendices covering the clinical examination of the subject and a brief life history of his principal companion.—*R. R. Willoughby* (Clark).

3489. **Stetson, R. H., & Fuller, F. L. Diphthong formation. A preliminary study.** *Arch. néerl. phonétique exper.*, 1930, 5, 31–36.—(*Biol. Abst.* V: 10939).

3490. **Van Loon, F. H. G. Die Bedeutung ur-instinctiver Phänomene bei "Primitiven" und in der Kulturgesellschaft.** (The significance of ultimate instinctive phenomena among primitive and highly civilized peoples.) *Zsch. f. Völkerpsychol.*, 1931, 7, 21–33.—It is generally accepted that different races show along with bodily differences a series of essential and hereditary psychic variations. These may be called racially constant properties, and will be found rooted in the phylogenetically oldest behavior, namely the deeper instinctive-affective life. For this reason we have too often attempted to judge primitive people from the standpoint of the higher feelings and intellectual faculties. Now we can find in psychopathology the ultimate forms of psychic existence just as we discover through the arrested developments of pathology the essential processes of bodily evolution. We can therefore learn a great deal concerning the psychopathology of primitive people by studying the phenomena of running amok and latah (hyperimitation—loss of will) as found among the Malays and others. These forms of behavior are psychic regressions comparable with the protopathic forms of pain sensitivity, and are intimately related to sexual conditions. The difference between highly civilized and primitive peoples is that in the former the protopathic affectivity is in greater measure under the control of the epicritic intellectual and voluntary influences than is the case among primitives.—*J. R. Kantor* (Indiana).

3491. **Vidil, C. Les mutineries de la marine allemande (1917–1918).** (Mutinies in the German navy, 1917–1918.) Paris: Payot, 1931. Pp. 207. Fr. 18.—The German navy was stricken twice in the course of the war by grave internal troubles. These were not without connection both with the defeat and the revolution. Thanks to official reports and to numerous polemics and explanations from various persons, it is possible to get an exact idea of what happened in the German navy in the course of the summer of 1917. The author believes it possible to draw certain conclusions from these facts. The revolt against established authority—which appears first in a sudden explosion, an unforeseen development, its excesses transcending all rules—has its own laws. There is no doubt of this when one compares facts of this kind which have manifested themselves in different epochs and different latitudes. And since these phenomena, which the author holds to be explicable, are for the first time presented to the public, he has preceded the explanation of them by a critical psychological examination. The conclu-

sions which he reaches bring a little order into the complex causes of the incidents in the German navy. —*Math. H. Piéron* (Sorbonne).

3492. **Von Hentig, —. Amerikanische kriminalwissenschaftliche Literatur.** (American criminological literature.) *Monatssch. f. Krimpsychol. u. Strafrechtsref.*, 1930, 11, 677–689.—Exhaustive presentation and discussion of recent American publications in the field of criminology, 1929–1930.—*W. Beck* (Leipzig).

3493. **Wood, A. E. Crime and penology.** *Amer. J. Sociol.*, 1931, 36, 1017–1029.—This article reviews the more important developments of the year in the field of crime and penology mainly by calling attention to programs and tendencies, although some statistics are presented. Federal census figures give the population of state prisons and reformatories and show an increasing ratio of prison to general population. Uniform crime reporting, taken over by the Department of Justice, covers "offenses known to the police" in 879 cities. Comparison of normal and actual prison capacity indicates the need for building programs which are under way. The federal government is building new institutions, expanding its program, and sponsoring research. Official and private agencies continue their research over a wide field of interests. Publications of the year are noted. —(Courtesy *Amer. J. Sociol.*).

3494. **Woofter, T. J., Jr. Race relations.** *Amer. J. Sociol.*, 1931, 36, 1039–1044.—The negro and Indian situations have, on the whole, shown improvement. Greater economic security for the negro has offset some of the effects of the economic depression; advancing educational standards since 1913 have been marked by the erection of the five-thousandth Rosenwald rural school. Greatly increased appropriations have been made for the Indian service. The policy leans toward "Americanization" with increasing pressure away from the reservation and toward the larger community. European and Mexican immigration have been greatly restricted, owing to the economic depression. On the other hand, immigration of territorial subjects has increased, with consequent friction in California over the Philippine situation, leading to legislative measures against the Filipinos.—(Courtesy *Amer. J. Sociol.*).

3495. **Wright, H. The sex factor in marriage.** New York: Vanguard, 1931. Pp. 122. $2.00.—The author, an English woman physician, presents an elementary treatise on desirable sexual attitudes, information, and techniques.—*R. R. Willoughby* (Clark).

3496. **Young, K. [Ed.] Social attitudes.** New York: Holt, 1931. Pp. xii + 382. $3.00.—The volume is dedicated to W. I. Thomas and consists of 15 papers written from a point of view similar to his by as many different authors who were all at one time associated with him either as graduate students or collaborators in research. An introductory note by K. Young summarizes and groups the papers. E. Faris introduces the concept of social attitudes, showing its liberating significance to sociologists who had previously been too much concerned with the absolutes of inborn equipment. R. E. Park indicates the limitation of behaviorism's treatment of human nature because of its concentration on infra-human forms and its neglect of the social interplay out of which attitudes develop and by which mores are created and modified. L. L. Bernard believes that the hygienic redirection of individual and group behavior may be accomplished by the rational reconditioning of attitudes on an intellectual plane. According to E. F. Young a normally balanced personality oscillates between certain limits, imbalance arising when activity proceeds in either direction beyond the normal arc. The life of the individual is non-reversible as well as rhythmical, and the personality-growth balance is fundamental. K. Young through consideration of types of fantasy association from autistic to objective thinking indicates how important language is as a clue to the behavior of men in groups. R. D. McKenzie shows that the stratification of racial groups in occupational pursuits in the Pacific basin is largely a matter of attitudes. J. F. Steiner points out that inherent factors make the small community remain more conservative than the urban center, and less congenial toward those who revolt against old traditions. E. W. Burgess discusses the transmission of culture through the home. The enormous differences in the culture of families in this country have not been fully appreciated. S. A. Queen presents a study of needy cases which lacked the desire to cooperate with the social agencies handling the cases. The conflict situations between social worker and client are analyzed. F. M. Thrasher illustrates with specimen material the use of socially superior boys for collecting social data in local areas and for information on adolescent behavior. F. Znaniecki deals with a voluntary crisis situation created by a community: the city of Poznan, Poland, planning the National Exhibition. The crisis goes through four stages as the group which undertakes the task attempts to achieve results with a minimum of alteration of the existing social structure, to the final stage of functional reorganization. E. S. Bogardus finds the problem of the Mexican immigrant similar to that of all immigrants, but complicated by certain unfortunate conditions in the border towns through which he comes. H. A. Miller finds that differences in the problems of the negro and the immigrant are not matters of varying nature, but of attitudes, complexes, and conditioned behavior. The attitudes of the whites serve paradoxically to accelerate the forces of self-assertion in the very direction that prejudice would suppress them. E. B. Reuter doubts the existing belief that the American negroes have a distinct contribution to make to American culture. Their African cultural heritage was destroyed in the slave state, and their present culture is not African, but American. E. H. Sutherland shows that the relation of feeble-mindedness to delinquency cannot be determined by dealing with it in isolation from other per-

sonal and situational factors. There are selected bibliographies of from 7 to 37 titles at the end of each chapter.—*E. R. Hilgard* (Yale).

3497. **Young, K. A recent contribution of psychoanalysis to political science: notes on Laswell's *Psychopathology and Politics*.** *J. Abn. & Soc. Psychol.*, 1931, 25, 465–473.—A review of Lasswell's book, *Psychopathology and Politics*, in which is presented a tentative formulation based upon case records in which private and early infancy and childhood experiences are shown to furnish the basis for public action in political careers.—*C. H. Johnson* (Boston Psychopathic Hospital).

[See also abstracts 3318, 3331, 3421, 3423, 3436, 3509, 3526.]

INDUSTRIAL AND PERSONNEL PROBLEMS

3498. **Anderson, R. N. The status of tests for the measurement of clerical aptitude.** *Psychol. Clin.*, 1930, 19, 214–217.—The author has gone through the literature of tests for clerical ability and appraised the scientific value of such tests according to criterion, measures of reliability, and measures of validity, in so far as these have been reported in the various studies. He finds that only three tests have been found to have correlations with proficiency criteria of .7 or over. In a number of studies *n* was too small to constitute an adequate sampling. Only four of the studies listed probable errors with their findings. The author concludes that most of the clerical tests that have been recommended for use are scientifically indefensible. They are not in most cases tests of aptitude, though they may be tests of proficiency.—*J. T. Metcalf* (Vermont).

3499. **Dieck, H. Zur Eignungsprüfung für den Vermessungstechnikerberuf.** (Aptitude tests for the surveyor's occupation.) *Zsch. f. angew. Psychol.*, 1931, 38, 369–447.—A preliminary analysis of surveying work indicated that its successful performance depended upon the following factors: accuracy, ability to image visual forms, an active healthy constitution, motor steadiness, interest in details, orderliness, resistance to monotony, adequate social graces. Appropriate devices were therefore constructed for measuring precision in scalar readings, manual control, concentration, immediate memory span, geometrical imagination, linear sketching, number combination, and esthetic sensibility. The testing session required two mornings for each individual. Large groups of pupils from the elementary, vocational, and secondary schools were used to obtain norms. The reliability of the battery was .76 and its correlation with school achievement .50. Author believes that the pronounced intra-individual differences secured imply that the sub-tests are actually analyzing distinct psychophysical functions. The validity is to be determined by a later follow-up study.—*G. W. Hartmann* (Berlin).

3500. **Hull, C. L. The differentiation of vocational aptitudes.** *Psychol. Clin.*, 1930, 19, 201–209.—Stressing the large number of aptitudes whose expression may lead to success, the author deplores the present tendency to overemphasize verbal and scholastic ones. The Binet Scale he regards as a measure of academic aptitude, and holds that we should speak of intelligences rather than of intelligence. Every person has a certain potentiality for every possible vocation in the world. These potentialities vary greatly in the degree to which they appear in a given individual. Though not clear, experimental results indicate that a person's best aptitude may be 2½ to 3 times as good as his worst. Differential prognosis is required, not simply vocational prognosis. To institute such a program it will be necessary first to group the vocations into types according to the human talents required in them. Then tests must be devised for them. Aptitude testing in its present form takes too much time, and there is too much duplication. A single universal test battery might be devised to cover the whole field. After this had been given and scored it would be possible by the use of multiple regression equations to predict the different aptitudes from the same set of test data. A much wider range of evidence should be sampled for the purpose of getting more efficient forecasts. As a step in this direction the author cites the present tendency to study the relation of aptitudes to anatomical, chemical, and physiological constitution, and to temperamental and emotional traits. He also reports that he has found evidence that suggestibility shows positive correlations with desirable character traits and with scholastic success. He describes a machine, invented by himself, for making automatically the calculations necessary in getting the aptitude forecasts from the test results.—*J. T. Metcalf* (Vermont).

3501. **Koch, C. C. Auto drivers' tests.** *Amer. J. Optom.*, 1931, 8, 174–177.—Preliminary tests on 200 drivers indicated that those with poorer vision and longer simple reaction times than normal had fewer accidents than the average. These results are interpreted in terms of over-confidence. Drivers with constricted visual fields, however, reported more accidents than those with normal peripheral vision.—*H. Barry, Jr.* (Tufts).

3502. **Laird, D. A. Wie steigere ich meine Leistungsfähigkeit.** (Increasing personal efficiency.) (Trans. by W. J. Briggs.) Berlin: Singer, 1930. Pp. 272. M. 4.50.—*R. R. Willoughby* (Clark).

3503. **Manson, G. E. Occupational interests and personality requirements of women in business and the professions.** *Mich. Business Stud.*, 1931, 3, No. 2. Pp. ix + 282–409. $1.00.—The replies of 13,752 members of business and professional women's clubs to questionnaires were used as a basis (1) for determining facts concerning their occupational interests and personality attributes; and (2) for developing a technique for measuring these qualities. This study is a tabular analysis of the data. Some conclusions are: Most women like, few dislike their occupations; but they are also interested in home-making and marriage; different personality traits are required for different occupations, in the opinion of

the employees; tests which were developed differentiate women in dissimilar occupations on the basis of interests, and measure quantitatively personality requirements of different occupations; homogeneity of interests was found to be less than in previous studies (possibly because the group was unselected). The group studied had a median age of 37.7, business experience of 13.7 years, and income of $1526.—*M. P. Montgomery* (Faribault, Minn.).

3504. **O'Rourke, L. J. Annual report of the Director of Research for the year ended June 30, 1930.** *U. S. Civil Service Comm.*, 1931, 29–42.—Includes a comparison of a correspondence method of character investigation of postal employees with the interview method; a discussion of a new stenographer-typist examination; and progress reports.—*C. M. Louttit* (Ohio).

3505. **Treat, K. The significance of test results in predicting efficiency in garment machine operating.** *Psychol. Clin.*, 1930, 19, 218–230.—A description of the standardizing of a group of tests for the prediction of efficiency in garment machine operating. The subjects were 242 girls, of whom 101 were a subnormal group, 40 were trade school students, and 101 were continuation school pupils. They ranged in age from 12 to 19 years, the average being 15 years and 10 months. The tests were a trimming test, Porteus maze, paper folding, card sorting, and tapping. The best results were found to be obtained with a combination of the first three, each one of the three weighted differently. The test proved to be most effective when used for the type of girl on which it was originally standardized, namely the subnormal.—*J. T. Metcalf* (Vermont).

[See also abstracts 3353, 3507.]

CHILDHOOD AND ADOLESCENCE

3506. **Arlitt, A. H. The child from one to twelve.** New York: Whittlesey House, McGraw-Hill, 1931. Pp. xxi + 228. $2.00.—This is the revised edition of *The Child from One to Six* by the same author (see V: 1644). Additional chapters are: *Discipline and the older child; Some problems of the older child; The modern parent.*—*J. C. Spence* (Clark).

3507. **Austin, F. M. An analysis of the motives of adolescents for the choice of the teaching profession.** *Brit. J. Educ. Psychol.*, 1931, 1, 87–103.—Of 1105 children, ages 11 to 19, 10% of the boys and 42% of the girls indicated teaching as their first choice of a profession. The predominating reasons given mention direct influence of relative or teacher in 48% of cases, fondness for school subjects in 40%, fondness for teaching in 26%, good salary in 25%, fondness for children and "easy" 22% each, good holidays in 21% of cases; others less frequently. The less significant reasons seem to be most in evidence during age 15–16. In general only a minority at all ages gave sound reasons or indicated that the choice was based on reasoned consideration. Throughout there is strong evidence of lack of exact knowledge about careers.—*K. M. Cowdery* (Stanford).

3508. **Baumgarten, F. Kritik einer Kritik.** (Critique of a criticism.) *Zsch. f. angew. Psychol.*, 1931, 38, 357–364.—A discussion of a controversial nature as to the character of precocious geniuses, directed at Révész, who offers a brief reply.—*G. W. Hartmann* (Berlin).

3509. **Clinton, R. J. A comparison of white and negro children: norms on mirror-drawing for negro children by age and sex.** *J. Educ. Psychol.*, 1931, 22, 186–190.—A comparison of 155 white high school pupils with 122 negro high school pupils gives the following conclusions: The whites are superior in general mental ability, in writing, and in mirror-drawing. Ability in mirror-drawing increases consistently from year to year within each group. There is no important difference between the groups in the simple motor process of marking.—*J. A. McGeoch* (Missouri).

3510. **Frank, L. K. The child.** *Amer. J. Sociol.*, 1931, 36, 1002–1010.—The year 1930 was marked by an event of great significance for the well-being of children, namely, the White House Conference on Child Health and Protection. This will be discussed following the presentation of certain facts regarding vital statistics, numbers and age distribution of children. Many important developments regarding children, such as activities of child clinics, day nurseries, etc., are omitted because yearly data are not available. Following these discussions will be presented other important events of the year affecting children. —(Courtesy *Amer. J. Sociol.*).

3511. **Gesell, A. Körperseelische Entwicklung in der frühen Kindheit.** (Infancy and human growth.) (Trans. by G. Frankenstein & K. Burschell-Schiffer.) Halle: Marhold, 1931. Pp. xii + 378. M. 16.50.—*R. R. Willoughby* (Clark).

3512. **Hamilton, A. E. Boyways. Leaves from a camp director's diary.** New York: John Day, 1930. Pp. 238. $2.50.—This book on "the psychology of the boy away from home" presents numerous instances observed by the author of how boys and their counselors have met and solved many types of problems which commonly arise in camps. An appendix presents a group of 16 suggestions to camp counselors. Throughout the book cooperative discipline is explained and many examples of practical mental hygiene are presented.—*L. W. Gellermann* (Yale).

3513. **Harris, H. A., Burt, C., & others. Report of the consultative committee on the primary school.** London: H. M. Stationery Office, 1931. Pp. xxix + 290. 2/6.—Memoranda on the physical and mental growth of children up to the age of 11 years are contributed by the authors. Administrative problems, internal organization, the special problems of retarded children, and the general curriculum for children up to 11 years are all considered in detail. Particular recommendations about branches of the curriculum are made. Staff, premises, equipment and examinations are discussed. A full summary of conclusions and recommendations is included.—*F. C. Bartlett* (Cambridge, England).

3514. **Hicks, J. A. The acquisition of motor skill in young children. II. The influence of specific and of general practice on motor skill.** *Child Development*, 1930, 1, 292–297.—The present paper reports a parallel study to the moving target test investigation on the effects of specific practice on the increase of motor skill. The 60 children in the target study were given the strength, perforation and tracing path tests once when the initial target tests were given, and again when the final target tests were given three months later. "On the strength and perforation tests the increases in skill without specific practice as shown by the tests were comparable to increases on the target test either with or without specific practice; while on the tracing test slight losses were found. No important difference was found on any of the four tests between the gains of the group that was given weekly practice on the target test and the gains of the control group. The implication of the experimental findings of this and of the previous paper is that factors other than specific practice may account for much of the learning of young children."—*W. McTeer* (Detroit City College).

3515. **Hirdansky, S. Problems associated with maladjusted children.** *Psychiat. Quar.*, 1931, 5, 278–286.—In the study of maladjusted children the great importance of early recognition and physical, mental and emotional treatment is especially to be emphasized. The conduct of a psychiatric clinic is described and the duties of psychiatrist, psychologist, psychiatric social worker and secretary are outlined. The various types of problems met in a psychiatric clinic are briefly discussed. The need of a rearrangement of our entire school plan of education whereby schools would be conducted on the departmental basis is stressed.—*E. T. Burr* (Vocational Adjustment Bureau).

3516. **Hooker, H. F. A study of the only child at school.** *J. Genet. Psychol.*, 1931, 39, 122–126.—117 only children from all social strata were rated after individual interviews on Terman's adaptation of the Woodworth-Mathews personal data sheet. Their ratings on Form A were compared with those of all their classmates, made in both cases by the teacher of each room; and their ratings on Form B were compared with those of selected control matches, made in both cases by three raters. No evidence was obtained that only children tend to present adjustment problems by reason of being nervous, hysterical, or "spoiled"; nor any that they are retarded in school. —*J. F. Dashiell* (North Carolina).

3517. **Kolodnaja, A. Besonderheiten der Konstitution und psychische Struktur.** (Constitutional peculiarities and mental organization.) *Zsch. f. angew. Psychol.*, 1931, 38, 249–269.—The work of Kretschmer's school on the relation between bodily morphology and behavior has been supplemented by isolated studies showing the typological and discriminative value of preferences for given forms and colors, differences in the distribution of attention, dominance of perseveration or association, etc., in distinguishing cyclothymics and schizothymics. In this report somatic and psychotechnical diagnoses were made of 1128 boys (aged 15–20) entering the Soviet transportation schools. The distribution of types was as follows: thoracic, 46.4%; muscular, 24.8%; asthenoid, 6.6%; hypoplastic, 8.6%; infantile, 11.0%; asthenic, 2.6%. The first three represent the adequate, and the last three the inferior organisms. The use of the compound psychological profile of Rossolimo showed that the curves of the normal types were not only more uniform in the varying capacities but also superior to those of the inadequate types. Thoracics and musculars are equal on most tests. The inferior morphological types are especially poor in motor functions. With the infantiles and hypoplastics, who are markedly inferior in the intellectual functions, it appears that where high concentrative attention occurs it is accompanied by lessened distributive attention. The trade school performance of these subjects was in accordance with the expectations of the tests and their correlated bodily indices.—*G. W. Hartmann* (Berlin).

3518. **MacNitt, R. D. Introversion and extroversion in the high school.** Boston: Badger, 1930. Pp. 224. $2.00.—A method is described of determining the extent of introvertive and extrovertive trends in high school pupils, and the results from 2000 boys and girls suggest approximately normal distributions of scores. There are chapters on the history of the development of the concepts introversion-extroversion, definitions and descriptions relating to the concepts, causes of introversion and extroversion, survey of previous studies, preparation of the psychological interview, age and introversion-extroversion tendencies in junior and senior high school pupils, sex and introversion-extroversion tendencies in junior and senior high school pupils, introversion-extroversion in relation to school achievement, number of siblings in relation to introversion-extroversion, introversion-extroversion and popularity, membership in organized groups as related to introversion-extroversion, organization officers in relation to introversion-extroversion, and summary and conclusions.—*H. Cason* (Wisconsin).

3519. **Morgan, J. J. B. Child psychology.** New York: R. R. Smith, 1931. Pp. ix + 474. $3.00.—The author presents in systematic form the latest findings in the field of child behavior. After outlining the methods and objectives of child psychology, wherein he stresses the genetic approach, the author presents a detailed discussion of the present status of our knowledge of infant behavior. This is followed by a chapter on the child's family relationships. "In the family the foundations are laid for all the later adjustments of the child. In his home life he develops attitudes toward himself, toward his physical environment, and toward people, which provide the basis for his adult personality. He progresses from a helpless, dependent being to a self-reliant individual and begins the long journey from egocentricity to an appreciation of the rights of others."

In a chapter which deals with the motor development of the child the stress is placed upon maturation and the development of inhibitions. The experimental techniques are discussed and evaluated. The chapter concerning emotional development draws heavily from the researches of Watson, Jones, and the Shermans. A chapter on motivation stresses the "specific experiences" of the child rather than instincts or physiological drives. Imagination is discussed as a means of manipulating the environment. In this connection the author presents lengthy discussions of deceit, autistic thinking, and ambition. The chapter on language brings together most of the relevant literature on the development of language in the child. In his discussion of verbal learning the author applies the results of memory experimentation. In like manner the chapter on thinking is based upon experimental work on problem solving. Chapters on play, social development, intelligence, and the integrated child complete the book. Each chapter is followed by a list of collateral readings and there are numerous footnote references to the literature.—*N. L. Munn* (Pittsburgh).

3520. **Munn, N. L., & Stiening, B. R. The relative efficacy of form and background in a child's discrimination of visual patterns.** *J. Genet. Psychol.*, 1931, 39, 73–90.—A child of 15 months was presented with a choice apparatus consisting of two small doors that could easily be opened and that bore visual patterns. Behind the correct door he found candy, but the incorrect door was locked. After preliminaries, 10 daily trials were set. The first problem involved the discriminating of a black-cross-on-white-diamond from a black-square-on-white-diamond, and was learned in 400 trials. A series of changes in the signals was then used for test series—only one change to each series, this being in the positive or in the negative signal, and in the control figure or in the background. In all, the positive stimulus (cross) was responded to after 45° rotation, after 5 changes in background, and with 5 different negative stimuli. The negative stimulus was an effective element in the total situation only once, when the positive was entirely new. Controls of incidental cues were set up. When positive and negative stimuli were reversed, the child readily adjusted to the change. Subsequent evidence confirmed the interpretation that the child was responding to form per se, regardless of its position in space, its background, or its relation to a negative form.—*J. F. Dashiell* (North Carolina).

3521. **Rinehart, A. C. What Pittsburgh junior high school pupils read.** *School Betterment Stud.*, 1931, 3, No. 1. Pp. 83.—One of a series of experiments conducted by the Henry C. Frick Commission, for the purpose of determining the moving influences in the lives of high school boys and girls. A reading questionnaire was used, asking for the following information: (1) books enjoyed; (2) what kind of literature do you like to read (fiction, biography, fairy tales, poetry, travel, history, short stories); (3) do you like to read books a second time. The questionnaire was given to two different groups of ninth year pupils in January and June, from eighteen different schools, and was answered by 2604 boys and 2906 girls, among them 319 negroes. Lists of books chosen are given.—*J. C. Spence* (Clark).

3522. **Stern, C., & Stern, W. Dauerphantasien im vierten Jahre.** (Stable fantasies in the fourth year of life.) *Zsch. f. angew. Psychol.*, 1931, 38, 309–324.—That the changes which occur during the fourth year bear a resemblance to those of puberty has been admitted by most observers. A major feature common to both is that the world ceases for a time to be comprehensible and a fantasy-world arises wherein the lost self-assurance can be re-established. Many errors in diagnosis, particularly with reference to story-telling or poetic gifts, have arisen from a failure to appreciate the normality of this developmental stage. A few relevant case studies are presented and interpreted. One youngster, age 3-0, began to act patronizingly toward his elder brother; the rôle of first-born which he did not have in reality he tried to exercise fictively (Esau-Jacob complex). A girl, 2-6, invented in a moment of misbehavior the name and qualities of a mythical creature to whom all her "bad" actions were referable. Another 3-6 child recited the interminable adventures of its non-existent "sister from Berlin." An only girl in a large family of boys invented a sister to compensate for her loneliness. After the fourth year the normal child becomes more realistically-minded and can keep the worlds of fact and fiction separate. Contrary to Freud, who sees in this year a sort of sexual bloom, the authors find the phenomena more nearly like those stressed by the individual psychologists. A caution is uttered against seeing in such conduct evidence of literary precocity.—*G. W. Hartmann* (Berlin).

3523. **Wechsler, D. The incidence and significance of fingernail biting in children.** *Psychoanal. Rev.*, 1931, 18, 201–209.—A statistical study of the incidence of fingernail biting among children at different age levels (1 to 17 years) indicates that the percentage of biting corresponds rather closely to the Freudian stages of psychosexual development; none occurs below the age of 2 years, the percentage then rises gradually to 6, where it remains constant until 12 for girls and 14 for boys, taking a sudden rise at these ages for a period of 2 years and then declining again. The author concludes that this activity is an unconscious onanistic equivalent.—*D. E. Johannsen* (Rochester).

3524. **Wheeler, O. A. Variations in the emotional development of normal adolescents.** *Brit. J. Educ. Psychol.*, 1931, 1, 1–12.—Emotional development during adolescence ordinarily follows three principal directions: (1) the arousal of the feeling of self from which results progress toward psychological independence; (2) the appearance or increase in intensity of sexual emotion; (3) the development of social, esthetic, and religious emotions. There are observed variations in time, speed, general in-

tensity, and in the relative importance of the different emotions. Environment, especially the immediate family factors, exerts strong influence in assisting or disturbing the balanced developments in the adolescent. The almost universal condition of unemployment constitutes a serious menace to the synchronized adjustments of the emotions of this age.—*K. M. Cowdery* (Stanford).

3525. **Wickes, F. G. Analyse der Kindesseele.** (Inner world of childhood.) (Trans. by D. Krais & F. Altherr.) Stuttgart: Hoffmann, 1931. Pp. 322. M. 9.50.—*R. R. Willoughby* (Clark).

3526. **Williams, L. A. The person-consciousness of a selected group of high school pupils.** *Univ. Calif. Publ. Educ.*, 1931, 6, 85–138.—Results gained from 2216 boys and girls of grades 7 through 12 in compliance with the instructions: "List the names of 25 men and women whom you think of as leaders, either in the past or at the present time. Tell why you think each has been, or is, a leader." Some of the conclusions drawn: sufficient attention to persons is not given in high school studies; children have a poor sense of values as to what makes for leadership; selections are made on the basis of dynamic rather than subjective qualities; children lack extended acquaintance with leaders in the fields of the fine arts, the classics, literature, women leaders, biblical characters; there is more familiarity with the applied phases of scientific contributions than with any other; the influence of movie stars is small; there is an over-emphasis upon political and military leaders; marked self differences appear in the selections; there is little evidence of progressive person-consciousness through the grades of the secondary schools; recency and propinquity are large determining factors in pupil choice of leaders; person-consciousness of high school pupils is provincial in nature, i.e., they are not widely familiar with persons other than those who have been connected more or less directly with affairs in the United States. Among the 23 tables are indicated the rank order by sexes of the 50 persons most often named; rank order of the first 25 names by grades; rank order of 25 women, biblical characters, moving picture stars, classical characters, literary persons, musicians, scientists, statesmen, and military leaders named. A selected bibliography of 33 titles.—*L. M. Hatfield* (Canton, Ill.).

3527. **Wilson, F. T. Errors, difficulty, resourcefulness, and speed in the learning of bright and dull children.** *J. Educ. Psychol.*, 1931, 22, 229–240.—"Dull nine- and twelve-year-old boys and girls found the complex task of learning to win games, success in which depended upon the application of an underlying principle, more difficult than did bright nine and twelve-year-old boys and girls, when their success was estimated in terms of frequency and repetition of errors. The dull did progress, however, and the bright children made the same kind of errors but fewer of them."—*J. A. McGeoch* (Missouri).

3528. **Wilson, F. T. Difficulty in the learning of shorthand characters by bright and dull children.** *J. Genet. Psychol.*, 1931, 39, 113–122.—Four groups of children, a bright and a dull at age 9 and age 12, were practiced on the memorization of shorthand symbols for the words in a story. As measured by the number of correct recognitions and associations, the difficulty of the symbols appeared to be a matter of their size, complexity, and regularity; and this for all groups. False recognitions and associations were more frequently made by the dull groups. In general, the differences between bright and dull groups appeared to be more a matter of degree than of kind.—*J. F. Dashiell* (North Carolina).

3529. **Witty, P. A., & Lehman, H. C. Sex differences: collecting interests.** *J. Educ. Psychol.*, 1931, 22, 221–228.—Data on collecting interests have been analyzed to emphasize sex differences. Girls are attracted by objects which may be used for personal adornment, objects which call out affection and sentiment, and objects associated with school life. The objects collected by the boys are widely different and reflect their outdoor and vigorous play life. Certain interpretations are offered.—*J. A. McGeoch* (Missouri).

3530. **Zillig, M. Experimentelle Untersuchungen über die Glaubwürdigkeit von Kindern.** (Experimental investigations of the credibility of children.) *Zsch. f. Psychol.*, 1931, 119, 311–371.—Authenticity was divided into soundness of statement and veracity. A battery of 12 tests was given to determine the former and a battery of 8 tests to determine the latter for each child (25 children took all the tests). On the basis of these tests, the children were ranked for soundness of statement and veracity. A rank correlation between the two qualities was found to be .04. The reason for this was found after series of tests were given for intelligence and character. Significant correlations were found between soundness of statement and intelligence, and between veracity and character. Several examples were given of groups of children with common personality factors and individual children ranking especially high or low in important tests. Finally the children were allowed to rank 15 of the subjects according to authenticity. Their rankings showed a significant correlation with the test results.—*M. B. Mitchell* (Yale).

[See also abstracts 3387, 3390, 3409, 3445, 3468, 3488.]

EDUCATIONAL PSYCHOLOGY

3531. **Amos, A. D. Examination and intelligence test forecasts of school achievement.** *Brit. J. Educ. Psychol.*, 1931, 1, 73–86.—The author has approached the problem of the most efficient type or types of tests for selecting pupils for secondary school training by administering to 2000 children of ages 10.5 to 14.5, median 12.25, the traditional arithmetic and English examinations and a group test of intelligence. Of these children 270 won places and continued to make secondary school records, which were compared with the examination and test results. In every

school group entrance examination plus intelligence test gave higher correlations with first year grades than did the entrance examinations alone; and in all but one group higher than intelligence test alone. With one exception the intelligence test gave higher correlations than did the entrance examinations alone. Results of comparisons with second year grades re-emphasize the necessity for including intelligence tests with the traditional examinations, although not as markedly as the results in the first and fourth years. This supports the view that school progress depends upon both native ability and special training, but that the correlations are not higher proves there are other factors involved in success.—*K. M. Cowdery* (Stanford).

3532. **[Anon.] Sixth yearbook of the Educational Press Association of America.** Washington, D. C.: Committee on Standards, 1930. Pp. 31.—An 11-page classified list of educational periodicals and a report of the 1930 annual meeting of the Educational Press Association of America are presented.—*L. W. Gellermann* (Yale).

3533. **B., I. J. Opvoeding van primitieve volken door overheerschers van hoogere kultuur.** (Education of primitive peoples by rulers of superior culture.) *Ons Nageslacht,* 1930, 3, 81–87.—This is a discussion of a report of the Education Commission of Southern Rhodesia. The report stresses the lack of emphasis upon the education of white settlers in this region and the impracticalness of such education as they do receive. The native blacks, it appears, profit eagerly by all opportunities offered them in missions and other schools to learn reading, writing, and figuring, because such knowledge fits them for congenial clerical positions and gives them prestige among their own people. The education of the white farming class, however, has been neglected. This class is not wealthy enough to send its children to England for their studies, and their education in Rhodesia is of an old, stilted, formal type which has little or no relation to the actual life of the children in their communities. In consequence, the report points out, schooling is perfunctory and there is the danger of the development of a class of "poor whites" who scorn farm labor and are too ignorant for skilled work. The Commission points out that Rhodesia has a climate, location, and natural resources which should enable it to exert a highly favorable influence upon the development of the other African colonies when once the possibilities for leadership in the white settlers have been developed by suitable and adequate education. It is recommended that more emphasis than heretofore be laid upon manual work and general science, upon the history, economics, and geography of Rhodesia itself, and upon the development of a more democratic attitude toward labor and toward the blacks. In conclusion, the author shows resemblances between the educational problem in Rhodesia and that in the Dutch East Indies and points out the eugenic importance of the successful solution of such racial and educational problems.—*E. M. Pilpel* (New York City).

3534. **Candee, B. The use of tests in the selection of pupils for rapid advancement.** *Psychol. Clin.,* 1930, 19, 210–213.—In New York City children are placed in rapid classes on their entrance to junior high school when recommended by the principal of the grammar school from which they came. It is assumed that about 15% of the children are able to do the work of the rapid class. Thus each principal tends to recommend 15% of the pupils from his school. Since the gifted children are not evenly distributed between the schools the system works badly in many cases. Charts comparing different schools are presented. The author holds that many difficulties could be avoided if the child were admitted to the rapid class only after having met certain objective standards.—*J. T. Metcalf* (Vermont).

3535. **Cattell, R. B. The assessment of teaching ability: a survey of professional opinion on the qualities of a good teacher.** *Brit. J. Educ. Psychol.,* 1931, 1, 48–72.—The qualities necessary for success in teaching most frequently indicated by supervisors of teachers and instructors of cadet teachers are analyzed and reduced to a list suitable for rating scale purposes including 22 non-overlapping attributes of which ten, embodying only those but little susceptible to education, are suitable for selecting prospective teacher material at early school levels. A bibliography is appended.—*K. M. Cowdery* (Stanford).

3536. **Fowler, H. L. The development of concepts: an investigation into methods of teaching.** *Brit. J. Educ. Psychol.,* 1931, 1, 13–40.—A test of the pedagogical principle that in teaching a concept one must begin with individual cases to reach generalizations. Three artificial concepts (two sets of geometrical relationships and a chart of an hereditary tendency) involving relationships corresponding to those of adjective-noun and adverb-verb, were taught by the three methods (1) from particulars to generalization, (2) from generalization to particular applications, and (3) as in the second but with explanations of the generalization. As a supplement an attempt was made to prevent errors. The third method, a combination of deductive presentation with explanation, was found most effective. The plain deductive method was most variable, depending on the clearness of the statement of the generalization. The experiments were with 500 children from 10 to 11 years old.—*K. M. Cowdery* (Stanford).

3537. **Immaculata, Sister M. Permanence of improvement and the distribution of learning in addition and subtraction.** *Cath. Univ. Amer., Educ. Res. Bull.,* 1930, 5, Nos. 9–10. Pp. 81.—A study in the permanence of gains made through drills as determined by several retests. The experiment was carried on in fourteen parochial schools in four states, 1715 children in the third, fourth, fifth, and sixth grades being the subjects. Twenty-four classes were drilled in addition; twenty-four were drilled in subtraction, and eight classes served as control groups. The experimenter concludes that

short practice periods give more economical returns than long periods; that the more highly distributed practice gives the better results; that greater and more lasting gains are secured from visual than from auditory presentation, i.e., that written drill is superior to oral; that older children tend to retain more than younger ones; and that summer vacation affects little the efficiency of arithmetical skills, and there is probably little need for intensive drill at the beginning of the fall semester. A bibliography of 51 titles is appended.—*L. A. Averill* (Worcester State Normal School).

3538. **Judd, C. H. Education.** *Amer. J. Sociol.*, 1931, 36, 1045–1053.—A general survey of the educational system of the United States by a representative commission is advocated in a volume issued by the National Industrial Conference Board. General principles to govern federal participation in education are recommended by the National Advisory Committee on Education. The North Central Association of Colleges and Secondary Schools has appointed a committee to propose new standards for the accrediting of colleges. The state institutions of higher education in Mississippi are dropped by the Southern Association of Colleges and Secondary Schools because they have undergone a political upheaval. Athletics continues to disturb colleges and universities. Standard tests and personnel problems are given a substantial subvention to be administered by the American Council on Education. Curriculum revision is undertaken on a national scale. School supervision is studied. Education by radio and adult education make progress. New York University carries on extension courses with the help of an aeroplane. The care and protection of children receives wide attention as a result of the White House Conference.—(Courtesy *Amer. J. Sociol.*).

3539. **Keilhacker, M. Prüfung des fremdsprachlichen Lesens.** (Testing foreign-language reading ability.) *Zsch. f. angew. Psychol.*, 1931, 38, 484–509.—In an effort to measure the ability of university students to master the essential thoughts of a passage in a foreign tongue, three texts of equivalent difficulty in English, French, and Latin were presented to 272 Königsberg students. Each student chose the language in which he preferred to be tested. Tabular analysis showed that the nature of the secondary school attended was the primary factor in determining which language was selected. English was most frequently chosen, despite the fact that fewer semester hours had been devoted to its study; the quality of the English translations, however, was poorest. Among professional groups, students with science majors were poorest in all languages. The humanistic gymnasium seems to be relatively more efficient in its linguistic instruction than the other school organizations; and correspondingly, Latin appears to be the best taught subject.—*G. W. Hartmann* (Berlin).

3540. **Lende, H. [Ed.] Reading lists on phases of the education and psychology of the blind.** New York: Amer. Foundation for the Blind, 1931. Pp. 40.—This is a bibliography of literature on the blind, classified under the following headings: arithmetic, begging, the blind-deaf, the blind feeble-minded, colored audition, discipline, dreams, geography, geometry, higher education, home teaching, imagery, Helen Keller, marriage, memory, mental tests, musical education, nature study, obstacle sense, physical education, pre-school child, public school classes for the blind, recreation, seeing after operation, sense perception, social training, space perception, touch, and vocational guidance. More than a thousand references are included, all of which are to be found in the reference library of the American Foundation for the Blind, Inc., 125 E. 46th St., New York City. Most of these references may be borrowed from this library.—*B. Casper* (Clark).

3541. **Marx, R. Versuche über die Leistungsfähigkeit von Studenten in muttersprachlichen Textlesen.** (Experiments on the native-language reading performance of university students.) *Zsch. f. angew. Psychol.*, 1931, 38, 448–483.—A reading text dealing with the circulation of the blood was administered to a total of 781 university students, gymnasiasts, and evening extension students. Questions which were difficult (easy) for one group were also difficult (easy) for the others. The university students made relatively fewer errors than the other groups, but even they were markedly deficient in the elementary scholarly virtues, particularly those of a non-intellectual character, such as conciseness, correct grammar, orthography, etc. Precision of response was higher among women, although omissions were also more frequent among them. Age differences, nature of preparatory school, and major subject studied were all negligible correlates.—*G. W. Hartmann* (Berlin).

3542. **Merry, F. K. A survey of the problem-solving ability of pupils in six residential schools for the blind.** *Teach. Forum (Blind)*, 1931, 3, 12–15.—A survey of 170 blind children in grades III–VI from six representative schools for the blind whose teachers administered and scored the Stevenson Arithmetic Reading Test 1, Form 2 (Problem Analysis) shows a favorable comparison with seeing children in the same grades. Blind children can "ascertain what is to be found out in the *problem* and the process necessary to its solution, but need instruction in enumerating the facts given and should be taught how to estimate answers."—*S. D. Robbins* (Boston, Mass.).

3543. **Paul, M. Aufnahmeprüfung und Begabtenauslese. Eine Untersuchung auf Grund der Erfahrungen an einer sächsische Aufbauschule.** (Entrance examinations and the selection of the gifted. A study based upon experiences in a Saxon secondary school.) *Zsch. f. angew. Psychol.*, 1931, 38, 270–308.—About a decade ago a Saxon ministerial edict made the admission of graduates of the elementary school to the higher schools dependent upon the scores made in a combined academic and psychological examination. The author presents a

detailed analysis of past records, showing that the correspondence between admission tests and later school accomplishment is far from perfect and that this correspondence fluctuates widely from year to year; but that over a ten-year interval the average correlation is .81. He finds in the union of pedagogical and psychological tests the most successful predictive device.—*G. W. Hartmann* (Berlin).

3544. **Pintner, R. Educational achievement tests for grades 4 to 8. Forms A, B, C, and D.** New York: Teachers College Bur. Publ., 1931.—This is a composite school achievement test consisting of five subjects: information, comprising geography, history, health, and civics; spelling; arithmetic, comprising computations and problems; vocabulary; and reading. The four forms are of equal difficulty. Form A has an alternate which is identical in content but in which the key letters indicating the right answers are different, thus discouraging any tendency among pupils to copy from one another. Alternates for Forms B, C, and D will be published later.—*L. A. Averill* (Worcester State Normal School).

3545. **Schultze, F. E. O., & Heisler, E. Hochschulpädagogische Leistungsprüfungen. Ueber die Leistungsfähigkeit von Studenten in der Beschreibung, Typenbestimmung, und Reihenbildung.** (Measures of achievement on the university level. Student performance in description, classification, and arrangement.) *Zsch. f. angew. Psychol.*, 1931, **38**, 177–248.—Group tests of observation, description, arrangement, and comprehension were submitted to 526 Königsberg students as part of an investigation on the basic requirements of successful university study. The main test (of the *Aussage* variety) involved a comparison of skull halves—ape, modern man, and Rhodesian. Comparative records were obtained from police and army recruits and pupils of other schools. The students exhibited no superiority in detecting significant items and the younger students did as well as the more mature. When the scores of the student body were matched with the demands of the instructors only 46–53% fulfilled them. The authors conclude that the formal training of the student for effective independent scholarship is not accomplished by the secondary schools, regardless of their type of organization, and that consequently a new duty devolves upon the university staff.—*G. W. Hartmann* (Berlin).

3546. **Stuart, M. H., & Morgan, D. S. Guidance at work.** New York: McGraw Hill (Whittlesey House), 1931. Pp. 104. $1.25.—Describes the plan of organization and integration of the various guidance agencies of the Arsenal Technical Schools at Indianapolis. Teachers are selected who are interested in guidance. Each pupil has a sponsor in his home group who follows him for three years. Such sponsors have about forty pupils under their jurisdiction. Blank forms facilitate the periodic check-up on the guidance problem. Some of these the student fills in himself, and there are also blanks for recording his cumulative grades. A freshman counsellor is also provided to deal particularly with guidance problems at the very outset. A formal course in vocational information is given, which includes visits to various factories and offices. There are try-out courses in the building and metal crafts for boys and in home economics and clerical fields for women. Special investigation is made of pupils who are failing and reassignment is possible. Those who have to work outside for self-support have their programs systematically organized. Teachers periodically note any outstanding traits of the pupils and report to headquarters. Exceptional individuals are given special privileges, such as a card which gives them *carte blanche* in any library connected with the school. A further questionnaire and final consultation are arranged at the end of their high school course.—*H. E. Burtt* (Ohio State).

3547. **Todd, J. M. Drawing in the elementary school.** Chicago: Univ. Chicago Press, 1931. Pp. 65. $.75.—Describes the method of teaching drawing used in the elementary schools of the University of Chicago. The essential feature of the method consists in training the children to draw by rote certain type forms constituting a "graphic vocabulary" on the basis of which more elaborate compositions can be built up. There are 39 plates and 27 figures in the text.—*F. L. Goodenough* (Minnesota).

3548. **Wiley, S. W. Recent trends in character education.** *Rel. Educ.*, 1931, **26**, 346–354.—Recent years have shown a great increase in the interest in character building. Writers have, however, been unable to agree upon a definition of character, and while there is a pronounced effort to approach the subject scientifically much effort and money have been wasted on unproductive methods. Parents and friends are recognized as valuable character-forming forces, and purposeful activity programs are coming to be used in schools and agencies of religious education. Group activities, parent training, measurements and tests, and the study of growth have also become prominent features of method. So far the product has been one of theory rather than practical results.—*J. P. Hylan* (Stoneham, Mass.).

3549. **Wodehouse, H. On the discernment of the disciplinary value of studies.** *Brit. J. Educ. Psychol.*, 1931, **1**, 41–47.—An analysis of student reports of their own observations of their own learning suggests that experimental and statistical research needs to be supplemented by subjective analysis and report of individual experience, which though not highly reliable tends to offset dogmatism. The purpose of the report is not to deprecate objective methods but to emphasize that subjective analyses offer values as a supplement and suggestion of further needs of objective investigation.—*K. M. Cowdery* (Stanford).

3550. **Wright, E. A. Organization and functions of research bureaus in city school systems.** *U. S. Office Educ.*, 1931, Leaflet No. 2. Pp. 14.—Table listing some 118 cities with bureaus of research, showing organization date, director, size of staff and functions.—*C. M. Louttit* (Ohio).

[See also abstracts 3328, 3332, 3444, 3521.]

BIOMETRY AND STATISTICS

3551. **Bruce, D., & Reineke, L. H. Correlation alinement charts in forest research. A method of solving problems in curvilinear multiple correlation.** *U. S. Dept. Agric., Tech. Bull. No. 210,* 1931. Pp. 87.—A concise discussion of statistical measures basic to curvilinear correlation; the method of curvilinear correlation; construction of alinement charts for prediction and the applicability of the methods to actual problems.—*C. M. Louttit* (Ohio).

3552. **Dickey, J. W. Reliability of integration index differences.** *J. Educ. Psychol.,* 1931, 22, 209–211.—The standard error and probable error formulas necessary in the comparison of indices of integration for both correlated and uncorrelated groups are derived.—*J. A. McGeoch* (Missouri).

3553. **Foran, T. G. A note on methods of measuring reliability.** *J. Educ. Psychol.,* 1931, 22, 383–387.—When, with the Morrison-McCall Spelling Scale, "allowances are made for differences in variability, reliability coefficients are higher for repetitions of the test than for similar forms." Order of giving is unimportant. The practice effect from taking the same test twice is estimated at 1.5 times the practice effect from duplicate forms.—*J. A. McGeoch* (Missouri).

3554. **Garvey, C. R. The sigmas of combined distributions calculated from sigmas, means, and frequencies of component distributions.** *J. Educ. Psychol.,* 1931, 22, 307–310.—Derivation of formulas. Investigators are urged to publish *N,* along with the statistical constants reported, so that work may be evaluated properly.—*J. A. McGeoch* (Missouri).

3555. **Kellogg, C. E., & Spence, K. W. Note on the standard errors of the standard errors of estimate and measurement.** *J. Educ. Psychol.,* 1931, 22, 313–315.—Derivation of formulas and a table to facilitate calculation of $SD_{sd_{meas.}}$.—*J. A. McGeoch* (Missouri).

3556. **Lindquist, E. F. The significance of a difference between "matched" groups.** *J. Educ. Psychol.,* 1931, 22, 197–204.—The usual formula for the probable error of a mean is based on the assumption that strictly random samples are involved. This assumption is not applicable to matched groups. A new formula for the standard error of the mean, derived by Wilks, is given, which takes account of the "restrictive influence of matching upon chance fluctuations in the mean." Based on this is a new formula for obtaining the standard error of a difference in obtained means for matched groups. This true standard error may be much less than that yielded by the usual formula.—*J. A. McGeoch* (Missouri).

3557. **Richter-Altschäffer, H. Einführung in die Korrelationsrechnung. Eine Darstellung der Grundlagen rationaler Schätzungen, Analysen und Vorhersagen für Wirtschafttheorie und Wirtschaftpraxis.** (Introduction to correlation calculation. A presentation of the fundamentals of rational evaluations, analyses and predictions for economic theory and practice.) Berlin: Instit. f. Landw. Marktforsch., 1931. Pp. 58. M. 2.50.—*R. R. Willoughby* (Clark).

3558. **Shen, E. A note on the definition of the harmonic mean.** *J. Educ. Psychol.,* 1931, 22, 311–312.—It is urged that the definition of the harmonic mean as "a special case of the weighted arithmetic mean where the weights are equal to the reciprocals of the measures" gives it a more systematic and comprehensive conception.—*J. A. McGeoch* (Missouri).

3559. **Spearman, C. Sampling error of tetrad differences.** *J. Educ. Psychol.,* 1931, 22, 388.—Two assumptions underlying the formula for the variance of tetrad differences are discussed.—*J. A. McGeoch* (Missouri).

3560. **Stephenson, W. Tetrad-differences for non-verbal subtests.** *J. Educ. Psychol.,* 1931, 22, 167–185.—A non-verbal test, consisting of 8 subtests, was given to 1037 girls in elementary schools. When the tetrad-difference technique was applied, a probable error about 0.016 in excess of that expected for sampling error appeared. This excess error is found to be removed, save for a single specificality, by conversion of the crude scores to fit a normal distribution. Save for this single specificality, then, the theory of two factors fits the observed results for non-verbal subtests. The single specificality isolated is attributed to a "speed preference."—*J. A. McGeoch* (Missouri).

3561. **Stephenson, W. Tetrad-differences for verbal subtests.** *J. Educ. Psychol.,* 1931, 22, 255–267.—A group of 8 verbal subtests was given to 1037 girls, and the tetrad-difference criterion applied. An excess observed error appeared, and in order to explain this various theories were tested, such as those of age, calculation mistakes, "speed preferences," "propinquity," tester's idiosyncrasies, group testing effects, and "similarity of relations." These possible sources of error seem inadequate to explain the whole of the excess error. Provisionally, it is suggested that "a sum of many small disturbances of the kind passed in view in the course of our paper may be taken to explain the observed excess error."—*J. A. McGeoch* (Missouri).

3562. **Wilks, S. S. The standard error of the means of "matched" samples.** *J. Educ. Psychol.,* 1931, 22, 205–208.—The mathematical derivation of the formula discussed by Lindquist (*J. Educ. Psychol.,* 1931, 22, 197–204).—*J. A. McGeoch* (Missouri).

[See also abstracts 3332, 3340.]

MENTAL TESTS

3563. **Allport, G. W., & Vernon, P. E. A study of values.** Boston: Houghton Mifflin, 1931. 8-page blank; 4-page score sheet; 11-page manual.—A scale for measuring the dominant interests of the personal-

ity; the aspects measured are taken from Spranger, and are theoretical, economic, esthetic, social, political, and religious. The test is in two parts; in part I, degree of preference for one of two opposed statements or attitudes is indicated; in part II, four such statements are arranged in order of preference. Scoring is such as to divide a total of 180 into parts proportional to the interests measured. The scale is self-administering, without time limits (about 20 minutes necessary); reliabilities of .72 and .82 have been secured; validities of .83 (corrected for attenuation) have been obtained with ratings, and there appear to be characteristic differences between professions.—*R. R. Willoughby* (Clark).

3564. **Barry, H., Jr. A test for negativism and compliance.** *J. Abn. & Soc. Psychol.*, 1931, 25, 373–381.—H. T. Moore's conclusion that individuals tend to change previous judgments to conform to the majority opinion was confirmed. A test for such susceptibility to majority opinion was devised and presented. Striking individual differences were found in such susceptibility and were measured in terms of a coefficient, S. In default of a more appropriate term, the test for S was designated as a test of negativism and compliance. Persons with low and negative scores for S tended to be: (1) critical, (2) derogatory, (3) irritable. Persons who tended towards irritability themselves tended to rate others as irritable.—*C. H. Johnson* (Boston Psychopathic Hospital).

3565. **Eurich, A. C. Four types of examinations compared and evaluated.** *J. Educ. Psychol.*, 1931, 22, 268-278.—Four types of examinations, essay, completion, multiple-choice, and true-false, were constructed to cover exactly the same subject matter. There is some evidence that, if reliable tests are made, one is as adequate as the other. The validity of the four types, when each is checked against the composite of the three others, is nearly equal. Completion and multiple-choice tests are most reliable. The essay examination shows less correlation with intelligence than do the three others. Considering the choice of all students, the multiple-choice and true-false tests are preferred to the other two types. —*J. A. McGeoch* (Missouri).

3566. **Holzinger, K. J. Thorndike's CAVD is full of *G*.** *J. Educ. Psychol.*, 1931, 22, 161–166.—It is shown, from data published by Thorndike, that the CAVD test is highly saturated with *g*. The Terman Group Test is saturated to an equal degree, with the Otis Self-Administering Test and the Stanford-Binet following in the order named. The simplicity and adequacy of the statistical techniques involved are emphasized. A defense is made of Spearman's law of eduction of correlates against Thorndike's criticism.—*J. A. McGeoch* (Missouri).

3567. **Kelley, T. L. What is meant by a *G* factor?** *J. Educ. Psychol.*, 1931, 22, 364–366.—Kelley objects that Holzinger's use (*J. Educ. Psychol.*, 1931, 22, 161–166) of certain of Kelley's data is unsound (V: 3566). One cannot generalize from relationships found in four tests to those supposed to lie in the mind in general, since this involves the assumption that the four tests sample the whole mental life.—*J. A. McGeoch* (Missouri).

3568. **Newcomb, T. An experiment designed to test the validity of a rating technique.** *J. Educ. Psychol.*, 1931, 22, 279–289.—From studies of the rating of behavior in a boys' summer camp, it is concluded that, under conditions "apparently optimum for rating purposes, ratings on specific behaviors were so largely colored by the surrounding halo as to be quite invalid. Neither frequent observation of the behavior being rated, frequent recording of it, nor weighting the scores in accordance with the degree of the rater's certainty had an appreciable effect on uniformity of rating. Behaviors never recorded, never seen, and those felt to be highly uncertain were as uniformly rated as those at the opposite extremes. Since the guessed ratings are of highly questionable validity, must not the others, which are no more uniform, be almost equally invalid?"—*J. A. McGeoch* (Missouri).

3569. **Pintner, R. A group intelligence test suitable for younger deaf children.** *J. Educ. Psychol.*, 1931, 22, 360–363.—A report of a non-language group test for young deaf children. The test, which is the first to be constructed for this purpose, is administered by means of pantomime and examples on the blackboard. Indications are that it is discriminative for ages 4 to 8, inclusive.—*J. A. McGeoch* (Missouri).

3570. **Porter, M. P., & Lauderbach, J. C. On the constancy of the IQ.** *School & Soc.*, 1931, 33, 675–676.—About 200 young children given the Pintner-Cunningham Primary Mental Test were retested 6–17 months later. The median gain for the 128 showing an increase in IQ was 7.6 points (q.d. = 6.7). For the 58 who lowered their IQ's on the retest, the median loss was 5.0 points (q.d. = 2.8). The correlation between test and retest scores was .718 and the range of the differences was 0–35 points.—*H. L. Koch* (Chicago).

3571. **Stephenson, W. Tetrad-differences for verbal subtests relative to non-verbal subtests.** *J. Educ. Psychol.*, 1931, 22, 334–350.—Data previously reported (V: 3560; 3561) on verbal and non-verbal subtests, applied to 1037 girls, are analyzed further. The two tests have an intercorrelation of .82. The evidence is against any group factor in the non-verbal tests, but is in favor of "one group factor extending rather evenly throughout the verbal subtests." It is tentatively held that this factor, V, extends through all verbal abilities.—*J. A. McGeoch* (Missouri).

3572. **Thurstone, L. L., & Thurstone, T. G. Personality schedule.** Chicago: Univ. of Chicago Press, 1929. Pp. 4.—223 questions to be answered by the subject concerning himself, calculated to reveal type and degree of emotional maladjustment.—*L. W. Gellermann* (Yale).

3573. **Tolansky, S. The association factor in intelligence testing.** *J. Educ. Psychol.*, 1931, 22, 321–333.—Analysis of results from a multiple-choice and from a mixed sentence test show that delayed reaction due to an emotional association is a significant factor affecting rate of reply in a test. The delay effects will probably be greater with children than with college students. Emotionally toned associations can act to reduce the number of questions done and to produce wrong answers.—*J. A. McGeoch* (Missouri).

3574. **Whelden, C. H., Jr., & Davies, F. J. J. A method for judging the discrimination of individual questions on true-false examinations.** *J. Educ. Psychol.*, 1931, 22, 290–306.—True-false examinations in the Yale Law School are scored by adding the sum of omitted answers to twice the sum of wrong answers. Warning is given against guessing. It is held that simple lack of information is not to be scored against as heavily as is definitely wrong information. A technique is worked out for showing the relative discriminative power of individual questions and the underlying theory is discussed. Correlations are given between average law grades and the true-false examination scores. In the latter, discriminating and over-discriminating questions correlate highly with law grades, non-discriminating questions yield low correlations, and reversely discriminating questions give uniformly low negative correlations.—*J. A. McGeoch* (Missouri).

[See also abstracts 3413, 3500, 3560, 3561.]

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